Targeted Roadway Design Training Based Upon Deficiencies Identified During the Quality Assurance Review of Roadway Design Plans

Certified Public Manager Project

Rob Bedenbaugh, P.E.

South Carolina Department of Transportation

February 13, 2013

Table of Contents

1. Introduction

The Preconstruction Division of the South Carolina Department of Transportation (SCDOT) utilizes a quality assurance review process to ensure consistent and on-going quality control has occurred during the production of design plans for transportation projects that are managed by the Preconstruction Division. The complexity and magnitude of state and federal design standards requires extensive quality control practices be maintained during the production of roadway design plans. Upon completion of the plans, the Roadway Design Support Section within Preconstruction provides quality assurance reviews of in-house and consultant prepared roadway design plans. The intent of these reviews is to verify that consistent and on-going quality control has occurred during the production of the plans and that statewide consistency with roadway designs has been achieved.

2. Problem Statement

Roadway design plans that are allowed to go to contract with poor quality create the potential to adversely impact the safety and operations of the roadway. Significant contract overruns and schedule delays may also be encountered. Poor quality also jeopardizes funding eligibility if the project is state and/or federally funded and the design plans do not adhere to the appropriate design standards.

Allocating funds to train roadway design engineers is one essential component to achieving consistent quality during roadway plan production. Limited availability of training funds requires the training content to be highly effective to ensure a time effective and cost beneficial approach to training roadway design engineers. Attending ineffective training does not promote enhancements to quality nor does it improve the capacity or capability of the

workforce. The time lost attending ineffective training results in lowered roadway plan production efficiency and can negatively impact workforce morale by making employees feel as though they are not receiving adequate tools to perform their jobs with a high level of quality. No data has been compiled to identify categories of deficiency associated with the production of roadway design plans. The lack of data makes it difficult to identify training that is truly needed to improve quality. The data evaluated as part of this project will assist in determining the training needs for plan production staff.

Achieving quality in design plays a critical role in SCDOT being able to meet our mission as defined in the South Carolina Code of Laws Section 57-1-30, which specifies that, "The goal of the department is to provide adequate, safe, and efficient transportation services for the movement of people and goods." In addition, the SCDOT Strategic Management Plan has identified three (3) Critical Management Areas (CMA's) that are directly related to the implementation of improved quality and a well-trained workforce. (Reference Appendix A – SCDOT Strategic Management Plan). The three (3) CMA's are:

1. Workforce – Our employees are the foundation of SCDOT.

2. Customer Service – Quality customer service is integral to the delivery of all SCDOT products and services.

3. Transportation Systems & Infrastructure – The products that SCDOT is responsible for facilitating and delivering to our customers and public partners in a safe and efficient manner.

3. Data Collection

Deficiencies with roadway design plans are documented during the quality assurance review by generating review comments using a comment review form. (Reference Appendix B – Quality Assurance Review Forms). The comment review form compiles all of the review comments into one written document and serves as correspondence between the quality assurance review staff and the plan production staff. Quality assurance review comments are generated for in-house and consultant prepared roadway plans for projects managed by the Preconstruction Division. A quality assurance review is conducted on roadway design plans at the following phases of plan development:

Right-Of-Way Plans

This set of plans is utilized to obligate funds for the acquisition of property that is necessary to construct and maintain the project. Significant roadway design details are finalized and only minor roadway design adjustments should be required beyond this phase of plan development. These plans do not include construction quantities.

Construction Plans

This set of plans is utilized to obligate funds for the construction of the project. All design details are finalized and the quantities to construct the project are estimated for the purpose of receiving competitive bids on the project.

The comments generated by the quality assurance reviews are electronically archived within the Roadway Design Support Section in accordance with SCDOT retention policies. The comment review forms for calendar year 2012 will serve as the source of data to determine the categories with the highest frequency of plan production deficiencies.

The comments generated by the quality assurance review process were categorized into the following two (2) major areas:

1. Comments for plans developed by SCDOT in-house production staff.
2. Comments for plans developed by SCDOT consultants.

Within each of the above major areas, the following project classifications were established to allow the data to be compared using projects with similar scopes of work:

1. Bridge replacement with roadway approaches – a project with a primary scope of replacing or improving a bridge. Roadway design is generally limited to the minimum amount of roadway approach work necessary to tie the bridge improvements back into the existing roadway.
2. Enhancement – a project with a primary scope of adding aesthetic improvements to a roadway. This generally involves adding landscaping, pedestrian accommodations, bicycle accommodations, on-street parking, and other context sensitive solutions to enhance downtown settings.
3. Interstate/Interchange improvement – a project with a scope to construct, reconstruct, rehabilitate, or otherwise improve interstates or interchanges.

4. Intersection improvement – a project with a primary scope of improving safety and operations of an intersection and is generally limited to the minimum amount of roadway design work necessary to tie-in the intersection improvements to the existing roadway.

5. Roadway widening – a project with a primary scope of improving capacity of an existing roadway facility by adding travel lanes.

Within each project classification, the following categories of deficiencies were established to allow the data to be processed. These categories correlate to roadway design features that are essential to achieve good quality:

1. Plan Appearance – the overall appearance of the plans in accordance with SCDOT plan preparation practices. This category includes significant plan appearance items such as missing plan sheets, incorrect versions of plan sheets, omission of critical notes (e.g., superelevation transition labels on cross sections), and other plan appearance items critical to accurately construct the design. Consistent presentation of information allows our customers to efficiently identify plan details.

2. Construction Quantities – the estimated quantities of the items needed to construct the project. These quantities are utilized to create internal cost estimates for the construction costs and are used for bidding. Accurate quantity calculations allow SCDOT to closely estimate project costs and avoid construction change orders due to inadequate quantities.

3. Design Criteria

    a. Design Speed

    b. Horizontal Alignment

    c. Vertical Alignment

    d. Superelevation

    e. Sight Distance

    f. Widths (Travel Lane/Auxiliary Lane/Shoulder)

    g. Vertical Clearance

    h. Cross Slopes

    i. Roadside Safety

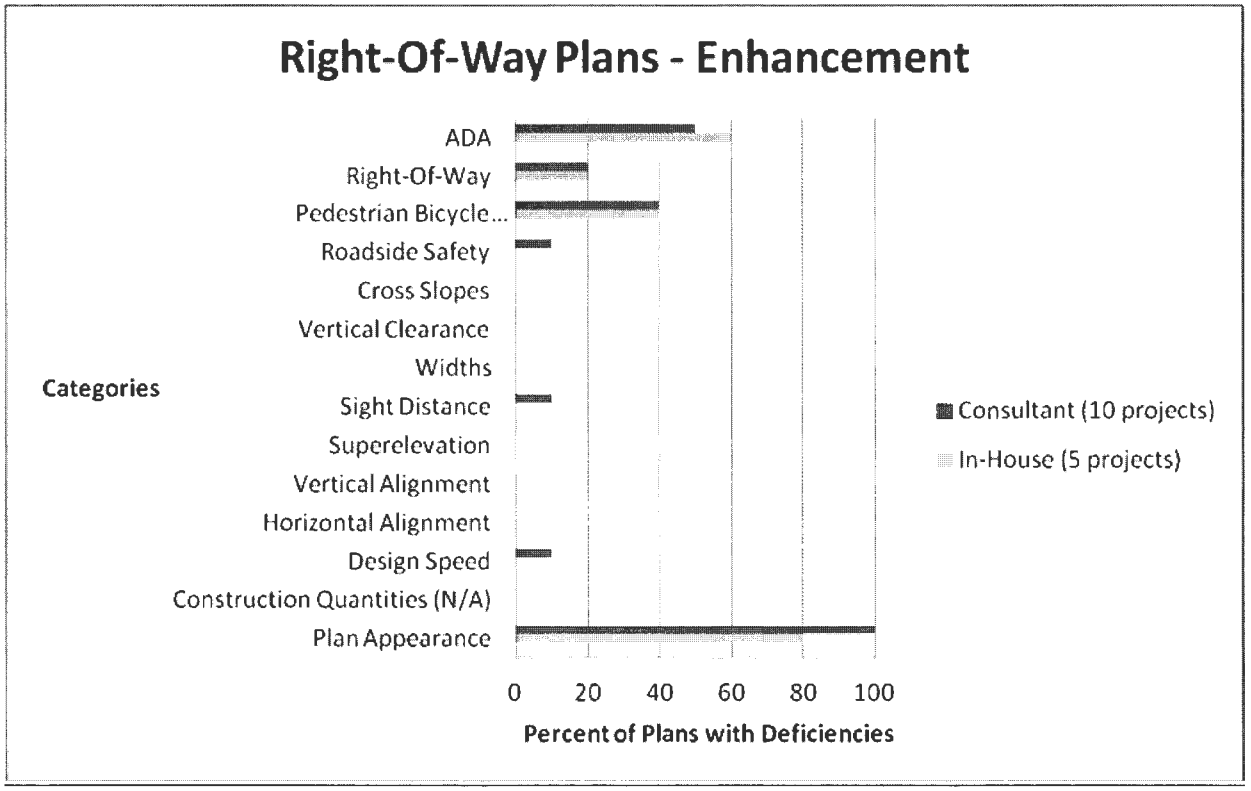
    j. Pedestrian and Bicycle Accommodations

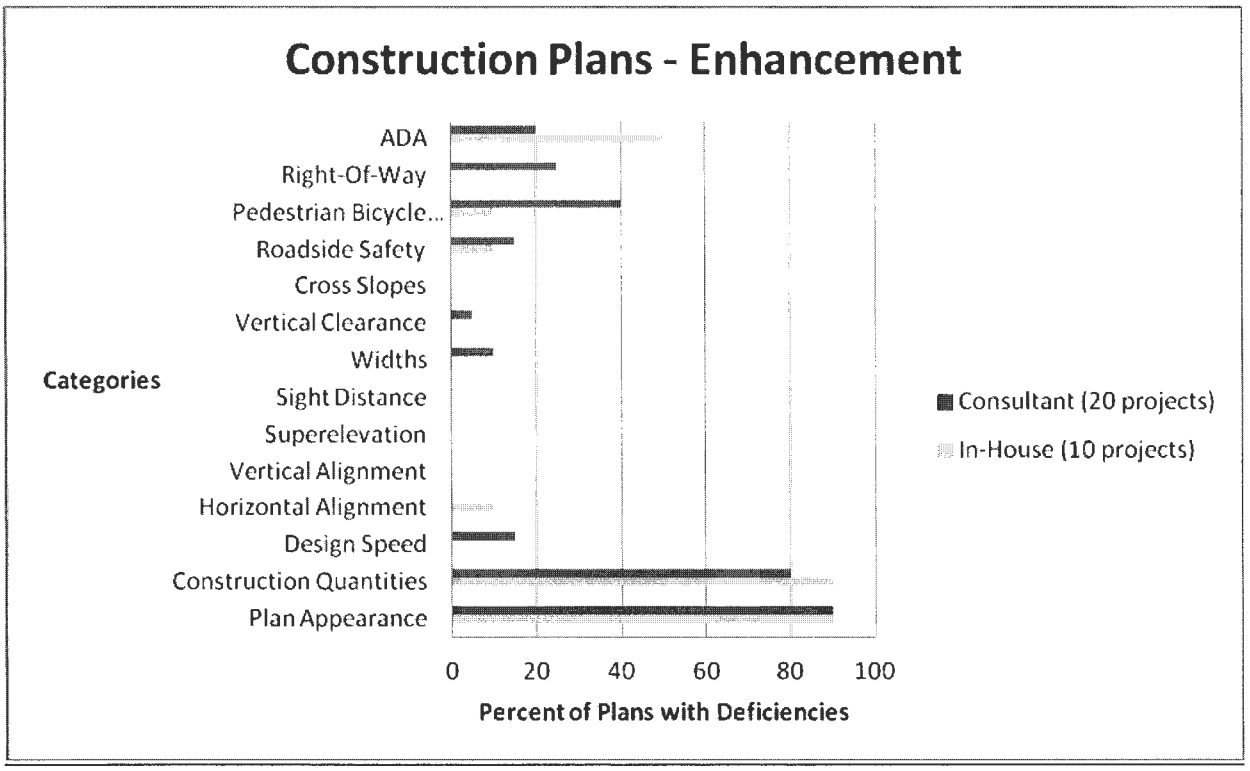
    k. Right-Of-Way

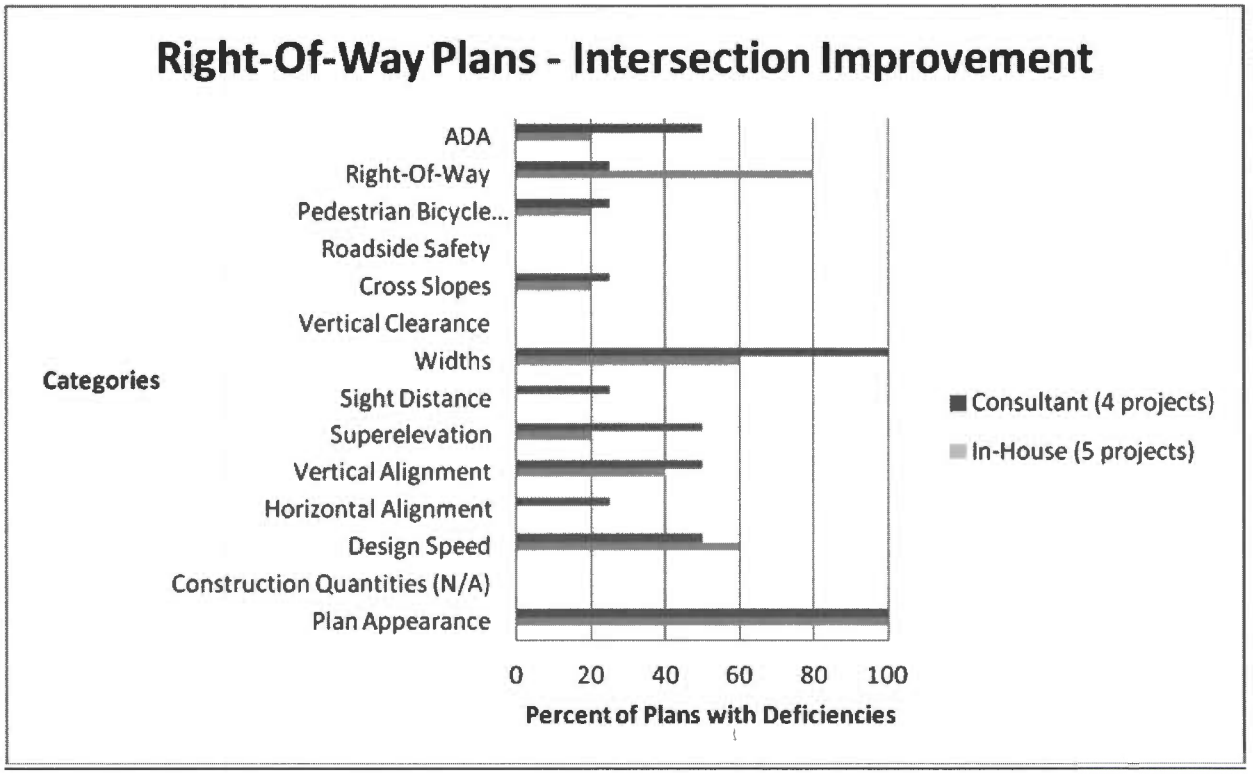
4. Americans with Disabilities Act (ADA) Compliance – the adherence to federal requirements concerning accommodations for persons with disabilities. Conformance to these requirements is essential to obtain compliance with federal requirements and to avoid extensive modifications after construction of the project has been completed.

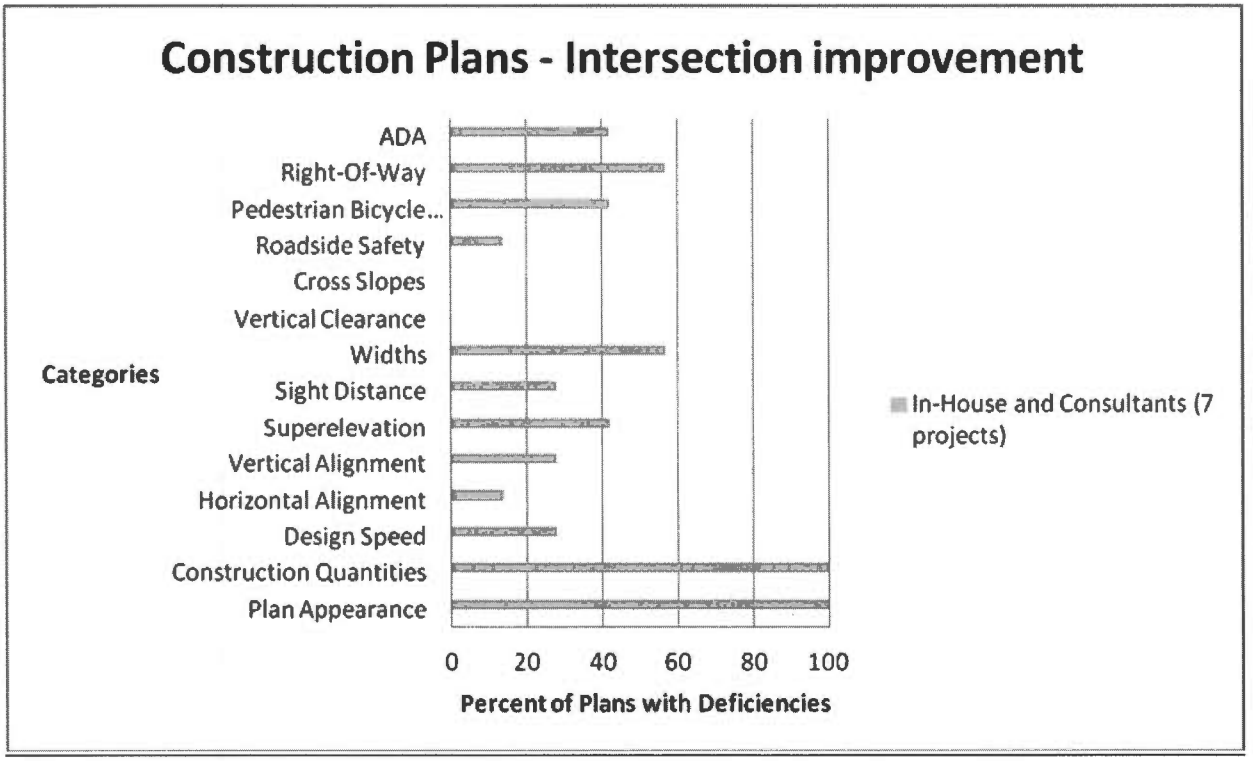
A variety of Pareto charts were utilized to compile the data into a visual format for evaluation. Pareto charts were chosen for their ability to visually represent the relative frequency

of the deficiencies identified during the quality assurance review process. Right-Of-Way plans for interstate/interchange improvements and construction plans for roadway widening were eliminated from the data collection due to having only one (1) project each as the source of data. In-House and Consultant projects were combined when there were less than ten (10) projects within the project classification. The categories of deficiencies are identified on the vertical axis and the frequency, specified in percentage of plans, is identified on the horizontal axis. The number of projects is specified in parentheses adjacent to the production source of the plans, In-House or Consultant.

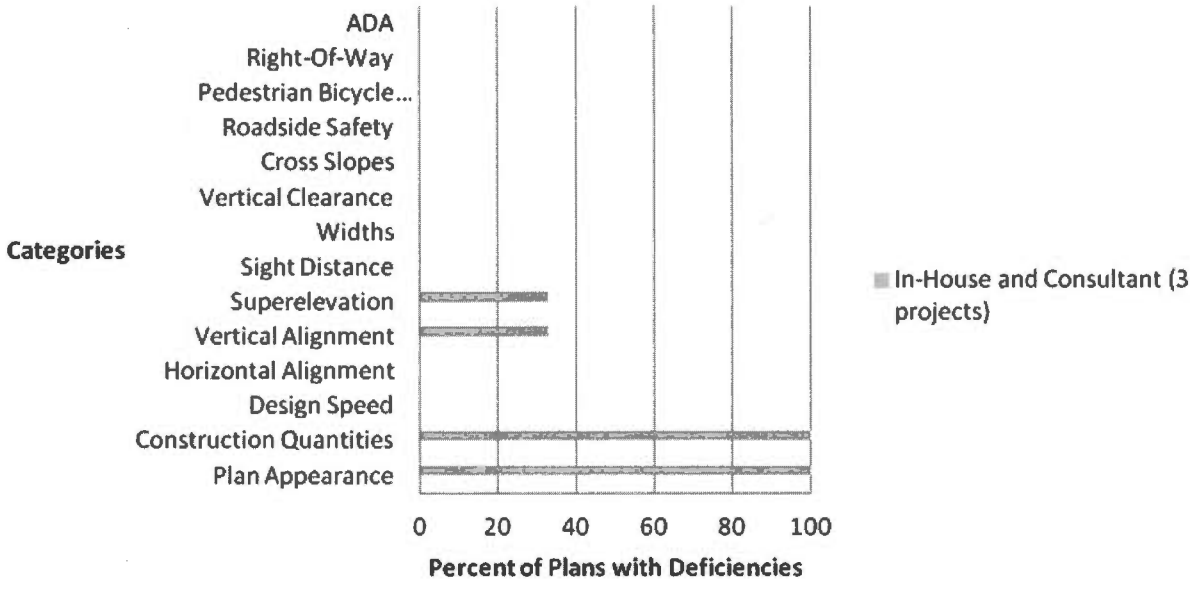

Right-Of-Way Plans - Enhancement
ADA
Right-Of-Way
Pedestrian Bicycle...
Roadside Safety
Cross Slopes
Vertical Clearance
Widths
Sight Distance
Superelevation
Vertical Alignment
Horizontal Alignment
Design Speed
Construction Quantities (N/A)
Plan Appearance
Categories
0
20
40
60
80
100
Percent of Plans with Deficiencies
Consultant (10 projects)
In-House (5 projects)


Construction Plans - Enhancement
ADA
Right-Of-Way
Pedestrian Bicycle...
Roadside Safety
Cross Slopes
Vertical Clearance
Widths
Sight Distance
Superelevation
Vertical Alignment
Horizontal Alignment
Design Speed
Construction Quantities
Plan Appearance
Categories
0
20
40
60
80
100
Percent of Plans with Deficiencies
Consultant (20 projects)
In-House (10 projects)

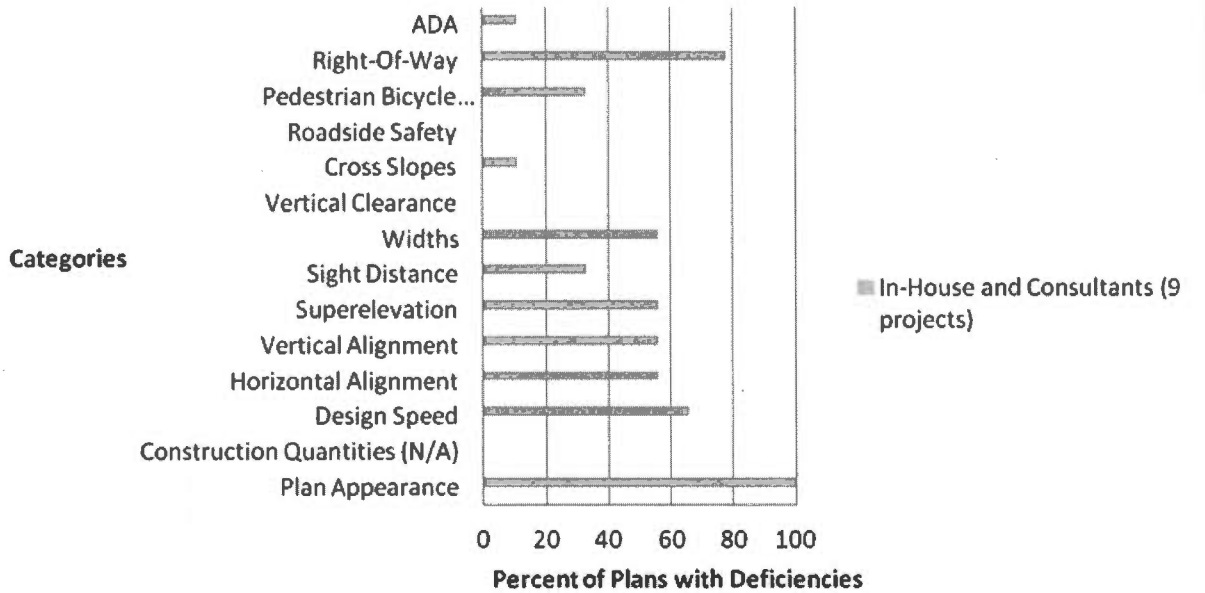

Right-Of-Way Plans - Intersection Improvement
ADA
Right-Of-Way
Pedestrian Bicycle...
Roadside Safety
Cross Slopes
Vertical Clearance
Widths
Sight Distance
Superelevation
Vertical Alignment
Horizontal Alignment
Design Speed
Construction Quantities (N/A)
Plan Appearance
Categories
0 20 40 60 80 100
Percent of Plans with Deficiencies
Consultant (4 projects)
In-House (5 projects)


Construction Plans - Intersection improvement
ADA
Right-Of-Way
Pedestrian Bicycle...
Roadside Safety
Cross Slopes
Vertical Clearance
Widths
Sight Distance
Superelevation
Vertical Alignment
Horizontal Alignment
Design Speed
Construction Quantities
Plan Appearance
Categories
0 20 40 60 80 100
Percent of Plans with Deficiencies
In-House and Consultants (7 projects)

Construction Plans - Interstate/Interchange Improvements



Right-Of-Way Plans - Roadway Widening



4. Data Analysis

The following categories of deficiency were reflected in the data as consistently high:

- Computation of quantities
- Plan appearance
- Right-Of-Way

The lack of consistent classroom training is reflected within the data by the high frequency of plan deficiencies in these categories. Numerous classroom training opportunities are available from the National Highway Institute (NHI) and other reputable resources concerning the principles and application for roadway design criteria; however, there are no classroom training opportunities for production staff concerning plan appearance, quantity computation guidance, or proper right-of-way verification procedures. Much of the training on these categories is obtained from peers through on-the-job training (OJT), which is subject to inconsistency since the source and content of the training can vary based upon personal experiences.

Enhancement projects, which are generally focused on improvements to walking, bicycling, and landscaping, displayed a high frequency of deficiencies with ADA compliancy. Training opportunities for ADA compliancy have been offered on a limited basis in the past; however, the training typically does not focus on the technical implementation of accessibility guidelines. SCDOT utilizes the United States Access Board's Revised Draft Guidelines for Accessible Public Rights-of-Way, November 23, 2005 (commonly referred to as PROWAG) for the technical implementation of accessibility requirements. Additional classroom training from

outside resources will be required to educate plan production staff on the specialized requirements found in PROWAG to ensure roadway design plans accommodate users with disabilities.

Intersection improvement projects and roadway widening projects reflected deficiencies with most categories, with right-of-way and design speed having a high frequency of deficiencies. As previously noted, right-of-way is a category that currently has no specific training. Selecting the proper design speed is also a category that has no training since selecting the proper design speed is generally a discretionary decision by plan production staff. Once selected, the design speed needs to be consistently applied to the roadway design features within the project. Inconsistent application of design speed is a quality control issue that requires attention at the production level. Information concerning design speed selection will be enhanced in the upcoming revision to the SCDOT Highway Design Manual and associated training will be offered.

5. Implementation Plan

The following actions will be required to fully implement the goal of identifying and implementing targeted training to improve the quality of roadway design plans. The responsible person or entity, timeframe for completion, and anticipated costs are identified with each action item.

✓ Finalize the content of the revised SCDOT Highway Design Manual.

- Responsible Entity – Roy Jorgensen Associates, Inc. (RJA) with oversight by SCDOT and the Federal Highway Administration (FHWA)
- Anticipated Completion Date – September 2013
- Anticipated Costs – $277,400

The South Carolina Department of Transportation secured a contract in 2011 with Roy Jorgensen Associates, Inc. to update the SCDOT Highway Design Manual. The content of the Manual needs to provide additional guidance for plan appearance guidelines, computation of construction quantities, compliance with right-of-way verification procedures, and ADA compliancy. The Manual will incorporate updated design guidance for pedestrian and bicycle design from the American Association of State Highway and Transportation Officials (AASHTO), recognized by FHWA as an authoritative source of design guidance.

✓ Develop training modules for each chapter of the SCDOT Highway Design Manual.

- Responsible Entity – RJA with oversight by SCDOT and the FHWA

- Anticipated Completion Date – September 2013
- Anticipated Costs – $68,400

As part of the contract to update the SCDOT Highway Design Manual, RJA was tasked with creating training modules for each chapter of the new Manual.

✓ Begin hosting training sessions for in-house and consultant staff using the findings of the data to determine the priority of the training modules that will be offered.

- Responsible Entity – SCDOT Roadway Design Support Office
- Anticipated Completion Date – February 2014
- Anticipated Costs – no cost to SCDOT. The training will be conducted by employees from the Roadway Design Support Office.

This training will utilize the training modules that were developed by RJA as part of the contract to revise the SCDOT Highway Design Manual. The training modules will provide a basic overview of the topics and will need to be supplemented by more focused training as noted in the following action. Based on the findings of the data, priority will be given to training plan production staff in the categories of plan appearance, construction quantity computation, and right-of-way verification.

✓ Coordinate with outside training sources to develop and host training using the findings of the data to develop the curriculum for the class.

- Responsible Entity – SCDOT Preconstruction Support Training Office will handle the administrative and contractual components with curriculum development by the SCDOT Roadway Design Support staff.

- Anticipated Completion Date – March 2014

- Anticipated Costs – Approximately $300 per student for 2 day class.

The SCDOT Preconstruction Support Training Office has previously secured contracts with outside resources to offer targeted training for various design disciplines within SCDOT. Classroom training will be sought out to address plan appearance, construction quantity computation, right-of-way verification, and ADA compliancy. Information concerning roadway design criteria will also be provided to ensure that plan production staff continues to stay abreast of the most current design guidance adopted by SCDOT.

✓ Conduct annual meetings to evaluate quality trends with SCDOT management level production staff.

The goal of this meeting will be to notify SCDOT management level production engineers of trends associated with the quality of roadway design plans, jointly identify training needs, and receive open feedback on standards, policies, and guidelines used by roadway design engineers.

- Responsible Entity – SCDOT Roadway Design Support Office

- Anticipated Completion Date – Occur annually beginning in Fall 2013

- Anticipated Costs – no cost to SCDOT.

The above action items will be integrated into the routine workflow of the groups identified with responsibility for implementation. The SCDOT Roadway Design Support Office has contractual authority over the initiative to revise the SCDOT Highway Design Manual and prepare the training modules for each chapter. Staff members of the SCDOT Roadway Design Support Office currently have job responsibilities to assist with training SCDOT staff in areas of roadway design. Implementation of the aforementioned action items will allow staff members of the SCDOT Roadway Design Support Office to better fulfill their responsibilities associated with training. Communication between the SCDOT Roadway Design Support Office and SCDOT management level production engineers will be maintained by way of the annual meeting to ensure the training being offered is meeting customer expectations.

Lack of targeted training is only one potential reason for poor quality to manifest within roadway design plans. SCDOT management level production engineers will need to monitor their workforce capacity and capability to determine if training is the only factor impacting the quality of their products. Establishing effective internal quality control measures will be a critical step to ensuring overall quality is achieved while producing roadway design plans. The ability of the data to quantify poor quality trends will provide valuable information for SCDOT management level production engineers to target production issues within their areas of responsibility.

The clarity and accuracy of written policies, guidelines, standards, and procedures also plays a significant role in achieving a high quality set of design plans. Lack of written guidance can result in inconsistent application of standards. Poorly written guidance that is inaccurate, outdated, ambiguous, or imprecise can also result in inconsistencies.

6. Evaluation Method

Revisions will be implemented to procedures utilized by the Roadway Design Support Office to track quality assurance review comments in order to ensure roadway design trends can be continuously monitored. Roadway Design Support Staff will be trained to categorize and compile quality assurance review comments so that negative trends with quality are identified. Categories of deficiencies will be compiled using a variation of Pareto charts to enable the data to be easily reviewed during the annual meeting with SCDOT management level plan production staff.

7. Summary and Recommendation

Classroom training for roadway design engineers generally focuses on the roadway design criteria required to accomplish the scope of the project. Classroom training does not emphasize the importance of plan appearance, accurate construction quantities, and verification of right-of-way in accordance with SCDOT practices. The high frequency of plan deficiencies in these categories supports increased training for plan production staff to assist with improving the quality of plans.

Providing effective training will allow plan production staff to have the knowledge to implement quality designs; however, training alone will not fully address all potential factors that negatively impact the frequency of plan deficiencies. Workforce capability and capacity will require constant evaluation by management to ensure obstacles to quality are addressed in a timely manner.

The training initiatives identified in this report will be implemented and data will be monitored to determine if the frequency of deficiencies is lowered.

Appendix A

SCDOT Strategic Management Plan

November 27, 2012

Dear SCDOT Employees, Managers and Partners:

SCDOT has embarked on an effort to develop a Strategic Management Plan by which we will gauge our progress towards accomplishing our mission.

While the process of developing this plan is not yet complete, I thought it was important to introduce you to our efforts. First, SCDOT senior staff conducted thorough task and risk analyses which led us to a set of ten department level priorities and the identification of six Critical Management Areas (CMAs). Leaders of each of those management areas then developed goals and objectives you can see in this document. Our next steps will involve the development of business plans for our many activities. These business plans will include more detailed goals and objectives and will be aligned with that activity's budget. Additionally, each unit will have the opportunity to review the performance standards in the employee appraisals in order to ensure alignment with the stated goals and objectives in their business plans.

Periodic reviews of our progress in meeting the goals and objectives of the Strategic Management Plan, the CMAs, and business plans will begin in 2013. The results will be posted on line and available for all to review.

As this management effort matures, I will keep you posted on our progress, on the results, and about the lessons we learned along the way.

Robert J. St. Onge, Jr.
Secretary of Transportation
South Carolina Department of Transportation

South Carolina Department of Transportation

Phone: 855-GO-SCDOT (855-467-2368)
Email: scdot_contact@scdot.org
www.scdot.org

STRATEGIC MANAGEMENT PLAN

OUR MISSION *(SC Code Section 57-1-30)*

"The department shall have as its functions and purposes the systematic planning, construction, maintenance, and operation of the state highway system and the development of a statewide intermodal and freight system…. the goal of the department is to provide adequate, safe, and efficient transportation services for the movement of people and goods."

OUR VISION

Striving to provide safe, reliable surface transportation systems and infrastructure and effective support for a healthy South Carolina economy through smart stewardship of all available resources.

CRITICAL MANAGEMENT AREAS (CMAs)

The plan is based upon a detailed analysis of the Department's statutory mission, state laws, guidance from the Governor, direction from the Transportation Commission, and requirements imposed on the state, as well as upon our analysis of threats and risks to our abilities to accomplish our mission to acceptable standards. These two analyses result in priorities and the identification of Critical Management Areas (CMAs). The CMAs are further defined by a series of focused goals and measurable objectives and are the basis for the development of the business plans for each activity. The process is completed through periodic assessments.

PRIORITIES

1. Actively seek all available resources and then apply them prudently to achieve mission requirements in accordance with the law, Commission decisions, Governor's guidance, and common sense.
2. Ensure SCDOT remains compliant with MAP-21 and other federal laws and regulations in order to maintain an uninhibited flow of federal transportation funds to South Carolina.
3. Optimize the impact of limited highway resources through focus on safety, early intervention to preserve the existing system, and on major corridors with the greatest impact on the traveling public, commerce and economic development.
4. Maintain a robust and National Bridge Inspection Standards-compliant program to inspect and monitor all public bridges and to repair and replace them in accordance with Commission-approved priorities.
5. Reshape the size of the State Highway System and work with municipalities and counties to reduce segmentation. Eliminate excess properties.
6. Establish and execute a management system, supported in part by a comprehensive IT-based enterprise system, which ensures proper controls are in place, activities are assessed regularly for compliance, and corrective actions are immediate and effective.
7. While protecting the environment, take all necessary steps with appropriate regulatory agencies, other governmental entities, and conservation and environmental groups to build a multi-option mitigation program and to speed the permitting process.
8. Achieve strong, cooperative and collaborative relationships with key government entities and other stakeholders in the transportation arena.
9. Establish a comprehensive Human Capital Investment program focused on the training, development, safety and wellness of the workforce in order to ensure that SCDOT can attract, develop, and retain the employees needed for future mission success.
10. Develop and aggressively deliver an information campaign to enhance the trust, confidence, and support of the public, the legislature and all other key partners through education and information about the activities of SCDOT and our funding requirements.

WORKFORCE – Our employees are the foundation of SCDOT.

Goal 1: Establish and sustain a work environment characterized by positive, engaged leadership, strong adherence to ethical behavior, and fairness in which all employees are treated with dignity and respect.

Goal 2: Develop a Human Capital Investment Program that enables SCDOT to attract, hire, train, develop, and retain talented people who are key to our success.

Goal 3: Manage SCDOT manpower requirements in a manner that results in adequate personnel being employed in order to accomplish our mission, goals, and objectives.

Goal 4: Revitalize programs and develop an investment strategy in order to enhance Safety, Health, and Wellness programs for all employees.

CUSTOMER SERVICE – Quality customer service is integral to the delivery of all SCDOT products and services.

Goal 1: Create a culture of exceptional customer service.

Goal 2: Provide consistent, professional and timely service to all customers.

Goal 3: Treat SCDOT employees as valued customers.

PARTNERSHIPS – SCDOT relies heavily on its partners to advance initiatives that address transportation needs in South Carolina.

Goal 1: Achieve strong, cooperative and collaborative relationships with key government agencies, civic and advocacy groups, and partners, especially USDOT (FHWA, FTA, FRA, MCSA), USACE, and DHEC.

Goal 2: Educate partners on SCDOT mission, goals and accomplishments; listen to partner needs/concerns.

STEWARDSHIP – SCDOT is committed to smart and prudent management of our resources.

Goal 1: Improve management of financial operations.

Goal 2: Improve management of all SCDOT financial resources.

Goal 3: Consolidate the oversight and management of all SCDOT procurement functions.

Goal 4: Maximize the utility of the SCDOT Enterprise System.

PLANNING – Dedicated to the planning, project development, right-of-way acquisition, delivery of plans and specifications, and the necessary environmental documentation and permits for the state's infrastructure.

Goal 1: Define the long-range passenger and freight transportation vision, needs, and priorities of the state.

Goal 2: Monitor as a priority the levels of congestion and performance of our portion of the National Highway System (NHS).

Goal 3: Reduce time needed for project delivery and maximize available funding as part of the project development process.

Goal 4: Develop an environmental compliance training program.

Goal 5: Reduce surplus property inventory.

Goal 6: Publish a monthly list of broad transportation projects proposed for contract letting for the coming 12 month period.

Goal 7: Ensure that fiscal planned obligation targets are monitored and met in each of the federal categories and commission approved programs.

Goal 8: Increase County Transportation Committee (CTC) spending on the state system.

TRANSPORTATION SYSTEMS & INFRASTRUCTURE – The products that SCDOT is responsible for facilitating and delivering to our customers and public partners in a safe and efficient manner.

Goal 1: Develop Asset Management Plans consistent with the new Federal Transportation Bill, (MAP -21).

Goal 2: Implement a multimodal maintenance program that minimizes the decline of our state's transportation infrastructure.

Goal 3: Ensure that federal resources expended on preconstruction activities are for projects that are highly likely to be taken to completion.

Goal 4: Maximize expenditures on safety projects with demonstrable impact in reducing the occurrence of crashes.

Goal 5: Execute a NBIS-compliant bridge program.

Goal 6: Identify infrastructure critical to safety, commerce, and economic development and prepare contingency plans in the event there is a loss of availability to the public.

Goal 7: Continue to integrate all emergency plans and preparatory activities with State Emergency Management Division.

Goal 8: Ensure our transportation network moves people and goods as efficiently as possible.

Appendix B

Quality Assurance Review Forms

In-House
Bridge Replacement

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US 17	**Rd./Rte. Name:**	Speedway Blvd.	**File No.:**	27.039603
County:	Jasper	**Project Description:**	US 17 Bridge Relocation over C.S.X. Railroad		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1/11/12	**Reviewed By:**	RLK		

Comment No.	Comment	Response
1	For a June 2012 or later letting, please update title sheet to include Environmental Permit Information box and revised "PUPS" box (IB 2011-6).	
2	Recommend following HDM Figure 34.1B regarding naming and order of index of sheets.	
3	Recommend removing negative signs from latitude and longitude coordinates given on title sheet.	
4	The equality in stationing given on title sheet should be shown in plans, profiles and cross sections.	
5	In rural areas, 500 feet is desirable between the PT and PC of two reverse curves (HDM Section 11.2.2.4). Additionally, by definition, the current design makes use of broken-back curves (HDM Section 11.2.2.5). Ensure design is practical or make changes if possible.	
6	For small deflection angles, horizontal curves should be sufficiently long to avoid the appearance of a kink (HDM Section 11.2.5). Refer to HDM Figure 11.2E regarding the minimum length of horizontal curves based on deflection angles.	
7	Verify appropriate asphalt rates are being used. Those given on typical section vary from those recommended by the latest Hot Mix Asphalt Selection Chart. Also ensure appropriate build-up is being used. The Hot Mix Asphalt Selection Chart recommends Intermediate Type C. Make any changes if needed.	
8	The typical section pavement design indicates a rate of material or depth of approximately 1.032 feet. Cross sections appear to show a pavement depth of approximately 1.4 feet. Verify pavement depth shown in cross sections based on pavement design and make any necessary changes.	
9	Include variable ditch note on typical section sheet if necessary.	
10	Include control points/benchmarks (with datum) on Reference Data Sheet.	
11	Recommend labeling centerline bearing at beginning of project (sheet 6) as is done at the end of project.	

Comment No.	Comment	Response
12	Ensure guardrail is being utilized at all locations where it is warranted due to embankments (see HDM Figure 14.4A) and show in cross sections.	
13	Include relocated centerline note on plan sheets (IB 1997-10).	
14	Reference Data Sheet shows Geopak chain data for three outfall ditches. Outfall ditches should also be show in plans as well as their profiles and cross sections be given. Ensure all outfall ditches have positive drainage.	
15	Balance points and earthwork information should be shown on profile sheets for next submittal.	
16	Earthwork information (areas and volumes) should be shown on cross section sheets for next submittal.	
17	Recommend moving "End Max SE" note given on sheet X32 to proper location between stations 372+50 and 373+00 (sheet X33).	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-91	**Rd./Rte. Name:**	River Road	**File No.:**	10.040353
County:	Charleston	**Project Description:**	Bridge Replacement over Tidal Stream		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1/30/12	**Reviewed By:**	KS		

Comment No.	Comment	Response
1	North Arrow on title sheet does not seem to follow direction of map.	
2	Breakup mileage on title sheet to show construction is being done on two separate roadways.	
3	Functional Classification on Typical Section does not match ITMS.	
4	Show appropriate Standard Drawing number for Guardrail on Typical Section as well as any other applicable Standard Drawings.	
5	Superelevation rate shown in curve data is incorrect.	
6	Show superelevation transition notes on cross sections.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US-17	**Rd./Rte. Name:**	US-17	**File No.:**	27.039603
County:	Jasper	**Project Description:**	Bridge relocation over SCL Railroad		
Type of Submittal:	RW	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	9/14/2012	**Reviewed By:**	SSS, BN		

Comment No.	Comment	Response
1	In reference to the temporary curve data, the superelevation rate (e) for P.I. = 373+06.36 should show a normal crown (NC) instead of 2.8%. Verify and revise accordingly.	The superelevation rate has been corrected on the reference sheet.
2	In reference to the temporary curve data, the superelevation rate (e) for P.I. = 335+50.12 should show e = 2.84% instead of a normal crown (NC). Verify and revise accordingly.	The superelevation rate has been corrected on the reference sheet.
3	RELOC. PC for P.I. = 340+61.75 note is not show in the plan sheet. Verify and revise accordingly.	RELOC. PC was updated on the plan sheet.
4	Label all present RW on the plan sheet per IB 2012-2. See sheet 6 for example	R/W labels were updated accordingly.
5	Use latest ECDS per IB 2011-4	The ECDS was updated accordingly.
6	Add guardrail to cross sections	The additional shoulder width required for guardrail is provided on the cross sections. The guard rail cell is not being shown at this time.

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-80	**Rd./Rte. Name:**	Shady Grove Road	**File No.:**	40.040649
County:	Richland	**Project Description:**	Bridge Approaches at I-26		
Type of Submittal:	R/W	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	3/1/12	**Reviewed By:**	KS, JKL, BTN		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	Updated traffic numbers will be added for construction.
2	Title sheet should include net length of bridges.	Net length of bridges will be included on the bridge plans title sheet.
3	Sheet 8 has the lower left hand property labeled as Tract No. 2, according to Property Strip Map this should be Tract No. 3	Correction made.
4	Missing Tie Equality for Outfall Ditch No. 8 on Sheet 8	Tie Equality added.
5	Verify Intersection Sight Distance is met for Broad Bill Road looking over Bridge Parapet on Shady Grove Road.	Through discussions with Traffic, it was determined that moving the stop bar forward would attain the sight distance needed. The stop bar location will be in the pavement marking plans of the construction plans.

SCDOT **Preconstruction Support – Roadway Design** **Quality Assurance Review Comments**

Rd./Rte. No.:	S-101	**Rd./Rte. Name:**	Ogden Road	**File No.:**	46.039110
County:	York	**Project Description:**	Bridge Approaches at Wildcat Creek		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/27/2012	**Reviewed By:**	CWB		

Comment No.	Comment	Response
1	When paving existing shoulders where practical and attainable, a minimum width of four (4) feet should be paved on the shoulder to provide for bicycle facilities where the ADT of the road is greater than 500. See Engineering Directive Memorandum (E.D.M.) No. 22 for guidance.	
2	Add note to title sheet for Bridge Plans. (Note: "Bridge plans bound under separate cover") See sheet 1. See Plan Preparation Guide (P.P.G.) for guidance.	
3	Show total of acres for tract number three (3) City of Rock Hill. See Right of Way Data sheet (sheet 4).	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-223	**Rd./Rte. Name:**	Possum Trot Road	**File No.:**	11.040187
County:	Cherokee	**Project Description:**	S-223 Bride Replacement over Garner Branch		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5/3/12	**Reviewed By:**	RLK		

Comment No.	Comment	Response
1	Plans and PES show a PCN suffix of RD01. Cover letter submitted shows as PCN suffix of PE01. Verify and revise if needed.	
2	Include file number and mileage in PES.	
3	Include EOR seal, date and signature on final construction plans.	
4	The portion of the quantity for Liquid Asphalt Binder PG64-22 represented in the typical section should be removed from the General Construction Note as is done with the asphalt quantities. Currently, the entire quantity is listed on the General Construction Note Sheet.	
5	The Summary of Estimated Quantities and PES specify 330 LF of Sediment Tubes. The General Construction Sheet specifies 500 LF. Determine the proper quantity and revise where needed.	
6	Determine if additional excavation quantities should be added to the Summary of Estimated Quantities or General Construction Note Sheet based on the trapezoidal ditch notes given on plan sheet 6. Uncertain if this quantity has been accounted for in the Summary of Estimated Quantities. Revise quantities in plans if needed.	
7	Replace pay item for Concrete Transition Curb with Bridge Approach Concrete Curb and Gutter (1'-10"). See Standard Drawing 403-210-00.	
8	Determine if this section of roadway will require rumble strips (see EDM 53).	
9	Final pavement design needs approval from Pavement Design Engineer.	
10	To avoid errors and/or misunderstandings in construction plans, all items (inclusions) listed on the General Construction Note Sheet shall be listed exactly as shown on the Pay Item list (PPG Page 4-2, see Watering, etc.).	
11	Replace "State Highway Engineer" with "Deputy Secretary for Engineering" within the General Construction Note (sheet 5).	
12	For clarity, recommend labeling datum by second Benchmark or labeling it next to the heading.	

Comment No.	Comment	Response
13	Recommend including present right-of-way information on all present right-of-way notes (or at least within one note at beginning of project).	
14	Guardrail is not plotted correctly in cross sections at stations 175+64 and 177+48 (sheets X2 and X3).	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-80/327	**Rd./Rte. Name:**	Belle Vue Rd./Patrick-Society Hill Rd.	**File No.:**	1316.039106
County:	Chesterfield/Darlington	**Project Description:**	S-80/327 Bridge Replacements over Cedar Creek and overflow		
Type of Submittal:	95 %	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5/30/12	**Reviewed By:**	RLK, ADN		

Comment No.	Comment	Response
1	Update the "Call 811" box on title sheet (IB 2011-5).	
2	Include note referencing bridge plans on title sheet.	
3	Title sheet should indicate there are no inequalities in stationing.	
4	Final construction plans should include all applicable SCDOT approval dates and initials as well as EOR seal signature and date.	
5	The Summary of Estimated Quantities should be a sum of the pay item quantities shown in plans and those given on the General Construction Note Sheet as inclusions. If the pay item is shown in plans, remove portion shown in plans from General Construction Note Sheet. Many of the pay items are shown in plans and also included on the General Construction Note Sheet (see unclassified excavation, HMA pavement, guardrail and connectors, Erosion Control items on sheet EC1, etc.). Verify and revise appropriate sheets.	
6	Verify quantities for HMA Surface Course and Liquid Asphalt Binder PG 64-22 based on typical sections and plans.	
7	Revise pay unit for Floating Turbidity Barrier shown in the Summary of Estimated Quantities from SF to LF.	
8	Summary of Estimated Quantities shows a Guardrail quantity of 850'. The General Construction Note Sheets shows a quantity of 900'.	
9	Determine if a pay item for Stabilized Construction Entrance is warranted (IB 2005-2).	
10	Refer to IB 2011-1 regarding the estimated quantity for Selective Watering. Revise quantity shown in Summary of Estimated Quantities.	
11	Refer to IB 2006-10 regarding the estimated quantity for Removal of Silt Retained by Silt Fence and Replace/Repair Silt Fence. Revise quantity shown in Summary of Estimated Quantities.	
12	Determine if a pay item for Rumble Strips is needed based on Engineering Directive Memorandum 53.	
13	Typical sections included in final plans should be approved by Pavement Design Engineer.	

Comment No.	Comment	Response
14	Show all applicable SCDOT Standard Drawings on the Typical Section Sheet.	
15	Ensure all ditches have a minimum depth of 1' for drainage purposes. Typical section shows a variable ditch foreslope (typical section 1 LT) and several ditch locations shown in cross sections appear close to falling below the 1' minimum depth.	
16	Label tract numbers on plan sheet to agree with Right of Way Data Sheet.	
17	Show lane widths on plan sheet.	
18	Ensure guardrail length of need is adequate base on the Roadside Design Guide Chapter 5.	
19	Present right-of-way note shown on plan sheet should include file number/docket number, project number and date.	
20	Profile sheet should include balance points relating to the earthwork information. The bridges should be excluded from balance points.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 11	**Rd./Rte. Name:**	Cherokee Foothills Drive	**File No.:**	42.038400A
County:	Spartanburg	**Project Description:**	Bridge Jacking at I-26		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	02/28/2012	**Reviewed By:**	AH		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year is measured from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
2	Pavement Design should be approved by the SCDOT Pavement Design Engineer.	
3	The quantity for Hot Mix Asphalt Intermediate Course Type C and Surface Course Type C seem high. The General Construction Note shows 652 Tons of Intermediate Course for buildup. Verify and adjust accordingly.	
4	Plan sheet references Concrete Transition Curb and Flume, though the Standard Drawing shown is 403-210-00 which is the current standard. Concrete Transition Curb should not be referenced in the note.	
5	The Project Number is mislabeled in either PES or the Plans. The plans are labeled as 038400RDO2 while PES is labeled 38400A.	
6	The following items shown in the Summary of Estimated Quantities does not match what is shown in PES: • 2103000 Flowable Fill • 3100320 H/M Asph. Base Cr. – Type B • 4011004 Liquid Asphalt Binder PG64-22	
7	Add BCA lines to Plan Sheets if needed.	
8	Controlled Access should be shown on Plan Sheets if applicable.	
9	General Construction Note should include updated item descriptions.	
10	Include Alignment Control Note on Plan Sheets.	
11	Include all applicable Signatures and Dates including the Engineer of Record on Construction Plans.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-985	**Rd./Rte. Name:**	Foster Road	**File No.:**	42.038400B
County:	Spartanburg	**Project Description:**	Bridge Jacking at I-26		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	2/28/12	**Reviewed By:**	AH		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year is measured from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
2	Pavement Design should be approved by the SCDOT Pavement Design Engineer.	
3	Plan sheet references Concrete Transition Curb and Flume, though the Standard Drawing shown is 403-210-00 which is the current standard. Concrete Transition Curb should not be referenced in the note.	
4	Verify the stationing for VPC and VPT for the vertical curve with VPI 20+36.86. The stationing shown does not add up to 380 feet.	
5	Add BCA lines to Plan sheets if needed.	
6	Controlled Access should be shown on Plan Sheets if applicable.	
7	Borrow Excavation is shown on the General Construction Note and the Profile Sheets making the total almost double what is shown on the Summary of Estimated Quantities. Adjust Accordingly.	
8	General Construction Note should include updated item descriptions.	
9	Include Alignment Control Note on Plan Sheets.	
10	The quantity for H/M Asph. Base Cr. – Type B appears low as shown on the Summary of Estimated Quantities. Verify and adjust accordingly.	
11	The following quantities do not match what is shown in PES: • 3100320 H/M Asph. Base Cr.-Type B • 4011004 Liquid Asphalt binder PG64-22 • 7192260 48"x48" Junction Box shown in PES not plans	
12	Include all applicable Signatures and Dates including the Engineer of Record on Construction Plans.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-977	**Rd./Rte. Name:**	Calvery Road	**File No.:**	42.039719D
County:	Spartanburg	**Project Description:**	Bridge Jacking I-26		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	3/6/12	**Reviewed By:**	KS		

Comment No.	Comment	Response
1	The design year ADT should be measured from the expected construction completion date (HDM Section 9.6.2.1). Revise traffic data on title sheet for a 20 year period beginning after construction	
2	Missing Project Number on Title Sheet.	
3	Net length of Roadway incorrect on Title Sheet.	
4	Include all applicable signatures and dates, including Engineer of Record, on final construction plans.	
5	Pavement Design should be approved by Pavement Design Engineer.	
6	Include alignment control note on plan sheets.	
7	Place Utility Owners Note on first plan sheet.	
8	Label Triangle Areas at Intersections.	
9	Add BCA lines to Plan Sheets if needed.	
10	Controlled Access should be shown on Plan Sheets if applicable.	
11	Label bridge toe of fills on profile sheets and cross sections.	
12	Plan sheet references Concrete Transition Curb and Flume, though the Standard Drawing shown is 403-210-00 which is the current standard. Concrete Transition Curb should not be referenced in the note	
13	Project number shown as 039719D in PES. Cover letter and plans show 039719RD05.	
14	PES gives a pay item number and description for HMA Surface Course Type CM. The Summary of Estimated Quantities shows a pay item number and description for Type C. Revise to match.	
15	Units do not match between General Construction Note and Summary of Estimated Quantities for Removal of Existing Guardrail.	
16	Quantity for Silt Basins should be shown on General Construction Note sheet as it is not detailed in plans.	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	I-26	**Rd./Rte. Name:**	I-26	**File No.:**	42.039719E
County:	Spartanburg	**Project Description:**	I-26 Bridge Jacking		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	2/28/2012	**Reviewed By:**	RLK		

Comment No.	Comment	Response
1	The design year ADT should be measured from the expected construction completion date (HDM Section 9.6.2.1). Revise traffic data on title sheet for a 20 year period beginning after construction.	
2	Include all applicable signatures and dates, including Engineer of Record, on final construction plans.	
3	Pay items shown on the General Construction Note as inclusion items should EXACTLY match descriptions given in the Summary of Estimated Quantities (for example, see Full Depth Pav. Patching – 6", pavement markings, selective watering, etc.).	
4	Pay items that are shown in plans should not be shown on the General Construction Note Sheet as inclusion items. The plans and inclusions both show 8' (for a total of 16') of 48" Smooth Wall Pipe. The Summary of Estimated Quantities Sheet only shows 8'.	
5	The Summary of Estimated Quantities is not in agreement with plans/inclusions regarding the amount of Rip-Rap needed for the project. Also plan sheet 6 should specify the class of Rip-Rap being used for the flumes.	
6	Plans should specify areas needing Geotextile for Erosion Control Under Rip-Rap in order to agree with Summary of Estimated Quantities.	
7	Plan sheet 6 references Concrete Transition Curb and Flume. Although the Standard Drawing number is shown correctly as 403-210-00, Concrete Transition Curb should not be referenced in the note.	
8	Project number shown as 039719E in PES. Cover letter and plans show 039719RD06.	
9	PES shows a HMA Base Course quantity of 76 Tons. The Summary of Estimated Quantities shows a quantity of 51 Tons. Revise to match.	
10	PES shows a Liquid Asphalt Binder quantity of 271 Tons. The Summary of Estimated Quantities shows a quantity of 270 Tons. Revise to match.	

Comment No.	Comment	Response
11	PES gives a pay item number and description for HMA Surface Course Type CM. The Summary of Estimated Quantities shows a pay item number and description for Type C. Revise to match.	
12	Pavement Design should be approved by Pavement Design Engineer.	
13	Paved shoulders are not generally shown on plan sheets.	
14	Verify pavement depth is shown correctly in cross sections. Typical Section indicates a total depth of 0.556'. Cross sections appear to show nearly 1'.	
15	Label present right-of-way on plan sheet 7. Also recommend labeling centerline bearing on sheet 7.	
16	Label control of access on plans sheets where necessary.	
17	Include alignment control note on plan sheets.	
18	Label bridge toe of fills on profile sheets and cross sections.	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-212	**Rd./Rte. Name:**	Edwards Road			**File No.:**	42.039719B
County:	Spartanburg	**Project Description:**	I-26 Bridge Jacking				
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:**	4	**Consultant:**	[redacted]
Review Completion Date:	3-1-12	**Reviewed By:**	VHM				

Comment No.	Comment	Response
1	Recheck mileage in PES comparing to the mileage on the title sheet.	
2	Show buildup on typical for clarity.	
3	Show Bridge Construction Access in plans (See Instructional Bulletin 2002-6).	
4	Show Std. Dwg. 403-205-01 as reference for bridge instead of Std. Dwg. 403-210-00 (See Steve Nanney to verify), also make the change in PES.	
5	Show bearing on alignment.	
6	Ensure all applicable signatures and dates, including Engineer of Record, on final construction plans.	
7	The following quantities do not match what is shown in PES and the Summary of Estimated Quantities sheet: Pay Item 3100320 4011004 4030340 7192260	
8	Add 8'-24" R.C. Pipe to Summary of Estimated Quantities sheet.	
9	Plan sheet 6 should specify the class of RipRap being used for the flumes.	
10	Recheck Geotextile for Erosion Control under Rip-Rap and include the amount needed for RipRap at pipe end (See sheet 6).	
11	Ensure pavement design is approved by Pavement Design Engineer.	
12	Show alignment control note on plan sheets.	
13	Label bridge toe of fills on profile sheets and cross sections.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-40	**Rd./Rte. Name:**	New Cut Rd.	**File No.:**	42.0.39719F
County:	Spartanburg	**Project Description:**	Bridge jackings		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	3/1/2012	**Reviewed By:**	SSS		

Comment No.	Comment	Response
1	The design year ADT should be measured from the expected construction completion date (HDM Section 9.6.2.1). Revise traffic data on title sheet for a 20 year period beginning after construction	Will keep ADT shown on plans
2	Include all applicable signatures and dates, including Engineer of Record, on final construction plans	Plans to be signed and sealed after revisions
3	Put pay item numbers in numerical order	Revised plans
4	The following quantity amount does not match what is shown in PES: • 8052210 End Anchor – Type B	Revised end treatment notes and quantities
5	The following quantity description does not match what is shown in PES: • 8055800 Curved Guardrail	Plans revised
6	Recheck pay items: 8052300, 8052210	See comment No. 4
7	Pavement Design should be approved by the SCDOT Pavement Design Engineer or with a PE seal	Pavement design has been signed
8	Radius labeled 70'R on Line 1 at station (+72.61) is 50'R, revise accordingly.	Revised
9	Notes for the End Anchors and End Terminals in the plans need to be clarified	See comment No. 4
10	Include Alignment Control Note on Plan Sheets	Added to plans
11	Controlled Access should be shown on Plan Sheets if applicable	NA
12	Add stations to the VPC and VPT notes on the profile	Stations added
13	Plan sheet references Concrete Transition Curb and Flume, though the Standard Drawing shown is 403-210-00 which is the current standard. Concrete Transition Curb should not be referenced in the note	RipRap Class added to note and transition curb removed
14	Verify pavement depth is shown correctly on cross sections. Typical Section indicates a total depth of 0.556'. Cross sections appear to show nearly 1'.	Cross sections now match the typical section

Consultant
Bridge Replacement

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC Route 462	**Rd./Rte. Name:**	SC Route 462	**File No.:**	27.040476
County:	Jasper	**Project Description:**	SC 462 Bridge Approaches Over Bees Creek		
Type of Submittal:	Right of Way Review	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1/11/2012	**Reviewed By:**	CWB		

Comment No.	Comment	Response
1	Project control number is not shown above the project identification box on the title sheet.	
2	Utilize the latest title sheet for consultants. The effective date is for the June 2012 letting. See IB 2011-5 for guidance.	
3	Pavement design needs approved by the Pavement Design Engineer. Pavement design box needs to be signed on typical section.	
4	Add bridge note to plan sheet (to be placed on one corner only) Note: (Construct Shoulder Paving, Bridge End Bridge Approach Concrete Curb and Gutter and Flume with Riprap Erect Thrie Beam Connector, Steel Beam Guardrail and End Treatment Type T (Typical Four Corners) See SCDOT Standard Drawing 403-xxx-xx for details.)	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-98 & S-22	**Rd./Rte. Name:**	Barrell Stave Road & Jones Ford Road	**File No.:**	3044.040197.1
County:	Laurens & Union	**Project Description:**	Bridge Replacement over Enoree River		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	4-5-12	**Reviewed By:**	VHM		

Comment No.	Comment	Response
1	Use the latest title sheet (See Instructional Bulletin 2011-5).	
2	Note: Recommend consideration from legal about the use of maps and imaginary from companies with copyright for their maps.	
3	Show mainline as Road S-98 (Barrell Stave Road) and Road S-22 (Jones Ford Road) throughout the project instead of S-98-22.	
4	Show Road S-98 (Barrell Stave Road) as road name for Laurens County and Road S-22 (Jones Ford Road) as road name for Union County for clarity on plan sheet – 6 and 7.	
5	Use the name "Pavement Marking Plans and Signing Plans" on the description for the Index of Sheets on the title sheet instead of "Signing and Marking Plans and Signing Quantities" (See Highway Design Manual 34.2.12 and 34.2.13).	
6	Ensure NPDES is calculated and shown on the title sheet.	
7	Recheck the functional classification shown on the typical for the mainline according to the Level of Service and the design speed (See Highway Design Manual 20.1.2.1 and 20.1.4).	
8	Recheck shoulder width on the typical section in accordance with the cross sections.	
9	Recheck total amount on typical section note for guardrail in accordance with the cross sections.	
10	Ensure that pavement design for the typicals is approved and sign by SCDOT Pavement Design Engineer.	
11	Ensure slope permissions are addressed (See Highway Design Manual 33.3, 34.2.5.1).	
12	Recheck superelevation for both curves on reference data sheet and plans sheets using eMax = 6% at 45 m.p.h.	
13	The reference data sheet shows P.I. Sta. 35+04.60 and the plan sheet shows P.I. Sta. 36+69.85. Show the correct curve data for curve 2 (See sheet 5A and sheet 7).	

Comment No.	Comment	Response
14	Label right-of-way on plan sheets in accordance with SCDOT standard practices (See Instructional Bulletin 1997-8, Highway Design Manual 30.3.1, 30.3.12 and 33.3.11). **See attachment as an example.**	
15	Further research the right-of-way information verified on the plans to ensure the most recent information is presented (See Plans Library).	
16	Label construction limits on plans (See Highway Design Manual 33.3.10, 34.2.7.7, 30.3.4 and Standard Drawing 100-105-00).	
17	Show NPDES lines on plans plotted and labeled (See Highway Design Manual 30.3.3, 34.2.7.8, Instructional Bulletin 2002-7 and Standard Drawing 100-105-00).	
18	Show the Bridge Construction Access on plans using the correct line style (See Instructional Bulletin 2002-6).	
19	Show Alignment Control Note on plans (See Instructional Bulletin 1997-11).	
20	Show end station on plan sheet.	
21	Show relocation note on plan sheets (See Highway Design Manual 34.2.7.4.2).	
22	Show Relocated PC and PT on plan sheet (See Highway Design Manual 34.2.7.4.2).	
23	Show the appropriate bridge notes on plans (See Highway Design Manual 34.2.19).	
24	Show guardrail symbology at beginning of bridge (See sheet 6).	
25	Ensure that earthwork and balance points are shown on profile sheets.	
26	Show toe of fill Sta. 29+40.00 note in another place on the profile for clarity (See sheet 7).	
27	Ensure the hydrology data and the high water mark is included on the profile (See Instructional Bulletin 2006-1).	
28	Show the beginning and ending note on the cross sections.	
29	Show beginning and ending bridge note, toe of fill stations and superelevation notes on cross sections.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC-72	**Rd./Rte. Name:**		**File No.:**	46.038511
County:	York	**Project Description:**	Bridge replacement over Fishing Creek		
Type of Submittal:	RW	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	12/5/2012	**Reviewed By:**	SSS		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	SSS	2	Add pavement design approval box to the typical sections, include design speed and any exceptions to that design speed.		
2	SSS	2	Explain the term "Breakover" used on the typical section sheet. Is the term Roll Over more appropriate?		
3	SSS	5 & X-sheets	The e used for superelevation on the curve data needs to match that shown on the cross sections. Revise accordingly.		
4	SSS	6-8	Add alignment control note to the plan sheets. See IB 1997-11.		
5	SSS	7	Verify that VPC and VPT stations are correct. See VPI 221+87.00 for example.		
6	SSS	6	Verify that the taper length on sheet 6 is adequate. (Station 200+50 to 201+40)		
7	SSS	8	Verify that existing profile elevations match existing cross section elevations. See stations 235+50 and 236+00 for example.		
8	SSS	X2	The high side shoulder (left side) on cross sections 200+00 and 201+00 need to match the travel way. Revise accordingly.		
9	SSS	X11	Show toe of fill stations on cross sections		
10	SSS	6-8	All drainage items need to be labeled per IB 2009-4		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 97	**Rd./Rte. Name:**	Great Fall Road	**File No.:**	12.038510
County:	Chester	**Project Description:**	Bridge Replacement over Rocky Creek		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5-8-12	**Reviewed By:**	VHM		

Comment No.	Comment	Response
1	In the Legend show where reference 5 should be shown on typical.	A note has been added to the Typical sheets that provides the station range for milling.
2	Shown longitudinal gradients under curve data (See Highway Design Manual 11.3(2) Figure 11.3A) – sheet 5B	Longitudinal gradients have been added to the curve data on sheet 5B.
3	Ensure the correct standard drawing (403-205 -01 is used if old wall or parapet is in place) is reference for this bridge compared to Standard Drawing 430-210-00 for new bridge with vertical parapet.	Standard Drawing 403-210-00 will be used for new bridge. The plans and quantities have been updated per standard drawing.
4	Show the flume and riprap at both ends of bridge except on the high side of superelevated sections (See notes on standard drawing for 403-205 -01 or 430-210-00).	Flumes and riprap have been shown on both ends of the bridge per standard drawing 403-210-00.
5	The elevations on the profile do not match the elevations on the cross sections. Show the correct elevations.	Elevations on the profile have been updated to the correct elevations.
6	Show Toe of fill on the profile (See Highway Design Manual 34.2.19).	Toe of fill labels have been added to the profile.
7	Use consistent labeling for Toe of Fill on the cross sections.	Toe of fill labels have been updated in the cross sections.
Additional Comments		
1	*I have looked at these, and see that the relocated centerline has been noted, along with the survey stations for the beginning and end of the relocation, but the original centerline is still not dark enough to see clearly, and it's not labeled.*	The original centerline and its stations will be shown darker. The original – SURVEY- centerline will be noted on the plans.
2	*Make sure that the estimated quantities include prime for the graded aggregate base (macadam)*	The quantities will include Prime Coat per the calculations in the PPG.
3	*The typical section's minimum width should be changed from 6 feet to 8 feet*	The typical section has been updated to show a minimum width of 8 feet of graded aggregate base. The cross sections and quantities will be updated accordingly.

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-255	**Rd./Rte. Name:**	Kings River Road	**File No.:**	22.039388
County:	Georgetown	**Project Description:**	Waccamaw Neck Bikeway Phase V-C		
Type of Submittal:	ROW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5/24/11	**Reviewed By:**	KS, TE, JT,TD		

Comment No.	Comment	Response
1	Numerous horizontal curves throughout the project are below the minimum design speed of 20 mph. Design Speeds for the shared use path should be kept consistent to aid riders. Curves should maintain a minimum design speed of 20 mph with the appropriate corresponding radius.	Curves with radii smaller than 100 feet are necessary in some areas due to physical constraints. Common constraints found on this project include power poles, trees (protected by Georgetown County Tree Ordinance), utilities and drainage structures. Efforts have been made to avoid using radii less than 100 feet where possible. Appropriate signage has been placed in areas where radii less than 100 feet are utilized.
2	There is no cross slope shown for the timber boardwalk at station 139+64.15 to 142+85.76.	Timber boardwalk will be an open slat boardwalk with 0% cross slope as shown on the superelevation labels on sheet 7. Superelevation transition is shown from 2% to 0% through Sta. 139+34.15 to 139+64.15 and from 0% to 2% through Sta. 142+85.87 to Sta. 143+15.87.
3	Missing NPDES lines on Plan Sheets behind all fill sections (See Instructional Bulletin 2002-7).	NPDES line will be added at STA 145+00. The remaining fill sections are along the existing roadway
4	Include a marking plan for pathway.	Pavement markings and signing for project are minimal and have been shown on sheet 6 and 7.
5	Show pathway width on plan sheets.	Path is labeled on sheet 6 and 7 as "8'-wide shared use path.
6	Pathway alignment through parking area at All Saints Campus needs to involve current/future plans to prohibit parking on SCDOT Right-of-Way and on path.	Signage and pavement markings will be added to plans to prohibit parking within crosswalk for the shared-use path.
7	Elevate pedestrian rail (or a portion of) to show open spaces between horizontal rails (Page 30)	An elevation view of the pedestrian rail will be provided in the final plans.
8	Pedestrian Railing should be labeled such and not called a "handrail." (Page 29)	Callout will be changed to "pedestrian railing".
9	Page 29 indicates a wood retaining wall. Should this wall be concrete?	The wood retaining wall is a more economical option, but we will explore substituting a concrete wall in its place.
10	*Nandina domestica* "*harbor dwarf*" is proposed for planting and nandina is on our *Roadside Plants to Avoid* list. This list can be found at the following web address: http://www.scdot.org/community/Landscapeguidelines.shtml Please provide a substitute shrub or eliminate the plantings. Leucothoe may be a possible substitute.	A plant substitute has been used in place of the Nandina. Soft touch holly, which is not on the SCDOT "Plants to Avoid" list has been proposed and has been approved by Santee Cooper for use at the base of the utility poles.

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-20	**Rd./Rte. Name:**	Lockhart Road	**File No.:**	28.039508
County:	Kershaw	**Project Description:**	Bridge Replacement		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	4/5/2012	**Reviewed By:**	S.S.S.		

Comment No.	Comment	Response
1	Add note for "Bridge plans bound under separate cover" to the title sheet.	Revised as noted
2	Add toe of fill stations for the bridges on the profile and cross section sheets.	Revised as noted
3	Is Bridge Construction Access (BCA) needed for this project?	No. Road closure will allow for use of S-20 approaches/roadway for access.
4	Add slope note to all ditches on cross sections. Some are missing.	Revised as noted
5	Add right of way labels to cross sections per IB 2012-1	Revised as noted
6	Use latest Roadway title sheet for Consultant prepared projects per IB 2011-5.	Revised as noted
7	Use latest erosion control data sheet per IB 2011-4	Revised as noted

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC-34	**Rd./Rte. Name:**	Bridge Replacement over Little River	**File No.:**	20.039042
County:	Fairfield	**Project Description:**	Bridge Replacement		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/24/2012	**Reviewed By:**	SSS		

Comment No.	Comment	Response
1	Use latest title sheet per IB 2011-5	
2	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
3	The taper length provided at station 36+00 and 63+50, based on a 60 mph design speed, is inadequate. Revise accordingly.	
4	Verify that adequate length of need for guardrail is placed at the bridge. Revise accordingly.	
5	Add the alignment control note to the plan sheets. See IB 1997-11	
6	Is BCA required on this project?	
7	Label toe of fill on profile for the bridge. (add to cross sections)	
8	Add new RW lines to cross sections per IB 2012-1	
9	Add superelevation transition stations to cross sections. Cannot verify accurate SE transition without these.	
10	Add begin and end notes to cross sections. Add road/alignment name.	
11	Add ECDS to plans. NPDES Disturbed area is over 1 acre	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-64	**Rd./Rte. Name:**	Anderson Mill Road	**File No.:**	42.037189.1
County:	Spartanburg	**Project Description:**	Bridge over North Tyger River		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/21/2012	**Reviewed By:**	AH, JL, BN		

Comment No.	Comment	Response
1	Earthwork quantities do not match what is shown on the Profile Sheets and General Construction Note. Verify and adjust accordingly.	
2	Use Smooth Wall Pipe in lieu of RC Pipe as shown on the Summary of Estimated Quantities. Reference SCDOT Instructional Bulletin 2009-4 for Design and Implementation of Alternate Pipe.	
3	Some pipe shown on the Plan sheets is not shown in the Summary of Estimated Quantities. For example. The 104 foot 36" RC Pipe on S-489 is labeled 36" Corrugated Wall Pipe in the Summary of Estimated Quantities. Verify and adjust accordingly.	
4	Pipe quantities do not match what is shown throughout the plans. Verify and adjust accordingly.	
5	There appears to be a 24' 18" pipe on sheet 10 that serves no purpose. There is also an unlabeled pipe on the same sheet. Verify placement and need and adjust accordingly.	
6	The quantity for Asphalt Aggregate Base Course Type B appears low. Verify quantity and adjust accordingly.	
7	The quantities for Sediment Dams appear to be lacking. Verify all necessary quantities and adjust accordingly. Reference SCDOT Standard Drawing 815-405-00.	
8	Many of the Erosion Control Items shown on the General Construction Note do not match the Summary of Estimated Quantities. Some pay items are different between the two while others have quantities that do not match. Verify and adjust accordingly.	
9	The quantity for Temporary Erosion Control Blanket does not match between the Summary of Estimated Quantities and the plans. Verify Quantity and Pay Item Number.	
10	The Pavement Design should be approved and signed by the SCDOT Pavement Design Engineer.	
11	Present Right of Way should be verified in accordance with SCDOT Instructional Bulletin 2012-2.	

Comment No.	Comment	Response
12	There is no North Arrow shown on sheet 7.	
13	The tie ins for all side roads should be labeled (For example, see tie road on sheet 7 and sheet 9).	
14	The Design Speed for S-64 from station 33+42.54 to 40+00 is labeled as 30 mph. However, the minimum allowable Design Speed for a Group 4 classified "C" Road is 35 mph per SCDOT HDM Figure 22.3A.	
15	The Directional Arrows for S-489 are backwards on sheet 7.	
16	Show Bridge Construction Access on plan sheet (See Instructional Bulletin 2002-6).	
17	Recommend placing relocation note on all applicable plan sheets (See Instructional Bulletin 97-10).	
18	The Pipe for the Driveway that is connected with S-489 does not appear to be labeled anywhere. Verify and adjust accordingly.	
19	There are no earthwork quantities shown for the driveway on sheet 13.	
20	The quantity for Steel-Backed Timber Guardrail (Type A) does not match the quantities shown throughout the plans.	
21	Label tapers, reverse radius, storage lengths, and left turn radii in plan sheets at the intersection of S-64 and S-489.	
22	Verify that an acceptable width for the horizontal curves at PI 20+59.40 and PI 35+56.57 are being provided based upon the selected design vehicle. Refer to SCDOT Highway Design Manual Figure 11.2F and Standard Drawing 150-210-00 for guidance.	
23	Verify horizontal stopping sight distance around S-64 Relocation Curve 1 and Curve 2 (sheets 6 & 7). The stopping sight distance required at 40 mph is 305', and 30 mph is 200' (HDM Figure 10.1A). Vehicles traveling around the inside of the curve (outermost lane) will have a line of sight that may become obstructed by objects near the right-of-way at this location.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 308	**Rd./Rte. Name:**	SC 308	**File No.:**	30.039441.6
County:	Laurens	**Project Description:**	Replace Bridge over Duncan Creek		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	07/10/12	**Reviewed By:**	AH		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year is measured from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
2	The Design Reference Label should be shown on the title sheet.	
3	The map on the title sheet should be labeled (i.e. Laurens County Map). Adjust accordingly.	
4	Ensure that the driveway at approximately 273+25 has appropriate intersection sight distance. It appears the guardrail and bridge structure may hinder sight distance. Cannot verify without profile of driveway. Verify and adjust accordingly.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-86	**Rd./Rte. Name:**	River Road	**File No.:**	44.038509
County:	Union	**Project Description:**	Bridge Replacement over Big Browns Creek		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	2/16/12	**Reviewed By:**	AH		

Comment No.	Comment	Response
1	Bridge stations are not shown on typical section.	
2	Recommend extending project limits to contain the entire transitions of curves with PI 212+50.65 and 230+76.53. If this is not possible, recommend extending the Limits to reach full superelevation on curve with PI 230+76.53.	
3	Verify quantity for Hot Mix Asphalt Intermediate Course Type C. The quantity shown on the Summary of Estimated Quantities appears low.	
4	The note for Guardrail in the South Eastern Portion of the Bridge is shown as the wrong amount. It is shown on the plan sheets as "Erect 37.5' Steel Beam Guardrail." It appears to be over 100' of Guardrail on the plan sheet. Adjust accordingly.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-255	**Rd./Rte. Name:**	Kings River Rd. Phase V-C	**File No.:**	22.039388
County:	Georgetown	**Project Description:**	From: All Saints Church To: S-22-46 (Waverly Rd.)		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12/14/2012	**Reviewed By:**	TE, TD, JT, CWB		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	CWB	1	Revise the traffic data shown on sheet 1. Since no traffic data will be used place N. /A. in all boxes.		
2	CWB	1	Add Initials and Date for the RPG Design Manager and Program Manager and also for Preconstruction Support Road and Structures. See the SCDOT Review box on the Title sheet.		
3	CWB	1	Show equalities in stationing as shown in the PPG on page 1-4. Example G4-Sta.124+07.51 Back = G2-Sta. 129+87.86 Ahead (-580.35) show all equalities like this on the title sheet.		
4	CWB	2	Pay item 4010005 Prime Coat needs to be added to the S.E.Q.S. Prime Coat is required when Graded Aggregate Base is used. See IB 94-7 for Prime Coat for Graded Aggregate Base Course. See the Supplemental Specifications, ERRATA to 2007 Standard Specification for Highway Construction for guidance.		
5	CWB	2	Graded Aggregate Base Course should include an Alternate pay item for Coquina Shell Base Course. Due to the location of the project in Georgetown County a note needs to be added to the General Construction Note Sheet. See IB 2000-2 for guidance.		
6	CWB	2	Revise the quantity shown for pay item 8156490 Stabilized Construction Entrance minimum quantity should be 275 S.Y. See I.B.2005-2 for guidance.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

7	CWB	2	Add additional pay items for seeding to the S.E.Q.S. and the General Construction Note. For guidance see IB 2011-1. 8104005 Fertilizer (Nitrogen) LBS 8104010 Fertilizer (Phosphoric Acid) LBS 8104015 Fertilizer (Potash) LBS 8105005 Agricultural Granular Lime LBS 8109901 Mowing ACRE		
8	CWB	3	Note design speed in the design speed block on the typical section. See sheet 3.		
9	CWB	5	Use the latest General Construction Note. See the attached file for guidance. See sheet 5.		
10	CWB	5	Do not show the entire quantity for Hot Mix Asphalt Surface Course - Type D only the quantity that is not shown in detail in the plans such as buildup and leveling at bridge end and drives.		
11	CWB	6	Add Alignment Control Note to each plan sheet. See SCDOT Standard Drawing 100-105-00 for guidance.		
12	CWB	6,7 and X-1 – X-9	For unclassified excavation show volumes on the cross sections and balance points on profiles. These plans have no volumes shown on the cross sections and have no balance points shown on the profiles. See profile sheets and cross sections. See attached file for example of balance points.		
13	CWB	6,7 and X-1 – X-9	Show finished grade profile elevations on all profiles ensure that they are in agreement with the finished grade elevations shown on the cross sections.		
14	TE	EC-14	It is suggested that the Bahiagrass be eliminated from Table 1, the Perennial schedule. Is it possible to substitute Bermuda grass for the bahia grass?		
15	CWB	X-6	Show guardrail on cross sections. See sheet X-6.		
16	CWB	X-1 –X-9	Show equality in stationing notes on cross sections.		
17	TE	NA	Limit the amount of fill put around exiting trees and shrubs.		

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-31	**Rd./Rte. Name:**	Red Bluff Road	**File No.:**	26.037725A
County:	Horry	**Project Description:**	Bridge Replacement of Five Bridges over Waccamaw Swamp		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	11/30/12	**Reviewed By:**	KS		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	KS	Plan Sheets	Label approach slabs on Plan Sheets.		
2	KS	2 & 5	Quantity given on Inclusion Items exceeds quantity shown on Summary of Estimated Quantity sheet for these items: Fertilzer (Nitrogen), Fertilizer (Phosphoric Acid), Fertilzer (Potash), and Agricultural Granular Lime.		
3	KS	Cross Section	Show present and new right of way on cross sections. See Instructional Bulletin 2012-1 for further guidance.		
4	KS	Cross Sections	Show tow of fills for bridges on cross sections.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-108	**Rd./Rte. Name:**	Cat Branch Road	**File No.:**	4756.040009.4 & 4756.040009.5
County:	Jasper	**Project Description:**	Replace Bridges over Cypress Creek		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	12/19/2012	**Reviewed By:**	CWB		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	CWB	1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2. The ADT count and the design year are shown reversed. Show design year first then ADT count.		
2	CWB	1	Signature and Date of Engineer of Record is needed on the title sheet.		
3	CWB	2	The quantity shown for pay item 8154050 Removal of Silt Retained by Silt Fence is low. See IB 2006-10 for guidance.		
4	CWB	5	Use the latest General Construction Note. See the attached file for guidance. See sheet 5.		
5	CWB	7 and X6	Show guardrail on cross sections through station 242+20 +/-.		
6	CWB	X1-X6	Add excavation, embankment and volumes to cross section. See HDM Fig. 35.2A for guidance.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-279	**Rd./Rte. Name:**	Gist Bridge Road	**File No.:**	44.039441
County:	Union	**Project Description:**	Bridge Replacement over Fair Forest Creek		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10-31-12	**Reviewed By:**	VHM		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	VHM	7, X3	Show correct station number for toe of cut on cross section at Sta. 109+91.05 compare to toe of cut on profile at Sta. 109+92.638 (See sheet 7 and sheet X3).		
2	VHM	1, 7	Show bridge width on bridge note on title sheet and plan sheet (See sheet 1 and sheet 7). Correction		
3	VHM	2	Add additional seeding quantities according to Instructional Bulletin 2011-1 – sheet 2.		
4	VHM	2	Add additional erosion control quantities according to Instructional Bulletin 2006-10 – sheet 2.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 462	**Rd./Rte. Name:**	Lowcountry Drive	**File No.:**	27.040476
County:	Jasper	**Project Description:**	SC 462 Bridge Approaches Over Euhaw Creek		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	1/3/12	**Reviewed By:**	RLK, BN, JL		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RLK	1	Provide all needed signatures (or initials) and dates on final construction plans.		
2	RLK	1	Provide a signature and date for approval of right-of-way acquisition.		
3	RLK	2/5	According to Instructional Bulletin (IB) 2004-14, Fine Grading is only to be placed on the Summary of Estimated Quantities. Recommend removing from General Construction Sheet.		
4	RLK	2/5	Summary of Estimated Quantities shows HECP Type 3 being used. General Construction Sheet shows Type 4 being used. Verify and revise where needed.		
5	RLK	Multiple	There is 24 TONS of Rip Rap (Class B) and 29 SY of Geotex./Eros. Cont. (Class 2) Type A shown on the drainage plan sheet that does not appear to be accounted for in the Summary of Estimated Quantities (as the entire quantity is shown on the General Construction Sheet as well). Verify quantity and revise where needed.		
6	RLK	2/3	Verify the quantity for HMA Base Course Type A. The amount shown in the Summary of Estimated Quantities seems high based on the work being performed as illustrated by typical section #2. Revise if needed.		
7	RLK	5	Provide pay item for Straw or Hay Mulch With Tackifier on General Construction Sheet as an inclusion item. It does not appear to be detailed in plans.		
8	RLK	2	Based on IB 2011-1, a pay item for Selective Watering is not needed for the project. Recommend removing pay item.		
9	RLK	3	Typical Sections should be approved by Pavement Design Engineer.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
10	RLK	3	Asphalt descriptions given in the typical section legend should match those found in the 2007 pay item list.		
11	RLK	6/D1	Refer to IB 2009-4 regarding implementation of alternate pipe shown on plan sheets.		
12	RLK	Multiple	Determine if a pay item for rumble strips is needed for the project (Engineering Directive Memorandum 53).		
13	RLK	3	Provide design speed for Cherry Hill Road. Unable to verify certain design criteria for Cherry Hill Road that is dependent upon design speed (vertical alignment, etc.).		
14	RLK	Multiple	Recommend beginning and ending projects outside the limits of superelevation development to ensure proper tie-ins and ensure adequate drainage within the developing section. Verify drainage will be handled efficiently.		
15	RLK	6	For cost effectiveness, bridge widths are generally as wide as the approach roadway widths (parapet to parapet). According to the typical sections this width is 44'. Plans show a 48.25 feet. Unsure what the bridge typical details. Verify bridge with and revise if needed.		
16	RLK	5	Revise wording of the General Construction Note from "State Highway Engineer" to "Deputy Secretary for Engineering."		
17	RLK	6	Ensure guardrail length of need is met on the southwest quadrant of the bridge.		
18	RLK	EC1	Refer to IB 2011-4 regarding an updated Erosion Control Data Sheet.		
19	RLK	X1-X10	Include labels for present and new right-of-way in cross section.		
20	BN, JL	6	Ensure that adequate stopping sight distance has been provided due to the guardrail and bridge parapet wall.		

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S.C. Route 462	**Rd./Rte. Name:**	South Carolina Rte. 462	**File No.:**	27.040476
County:	Jasper	**Project Description:**	SC Route 462 Bridge Approaches over Bees Creek		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1/3/2012	**Reviewed By:**	CWB		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
			Comments from previous Right of Way Review that have not been addressed.		
1	CWB	3	Pavement design needs approval and signature by the Pavement Design Engineer.		2
			Construction comments.		
1	CWB	1	The RPG Design Manager and Program Manager need to initial and date the SCDOT review box.		1
2	CWB	1	Preconstruction Support personal for Road and Structures need to initial and date the SCDOT review box.		1
3	CWB	1	Signature and date is needed for the Engineer of Record on title sheet.		1
4	CWB	3, 6	Add rumble strips to plans. See EDM No. 53 for guidance.		1
5	CWB	5	Use the latest construction note. See the attached file for guidance.		1
6	CWB	5	Show erosion control items separately on the General Construction. See PPG Chapter 4 for guidance.		1
7	CWB	5	Revise the quantity shown on the General Construction Note for Right of Plat from 1 LS to NEC LS.		1
8	CWB	3, 14	In general, bridge widths should match the approach roadway widths (traveled way plus shoulders 44'). The bridge width shown on the plans is 43.25 feet. See HDM Chapter 13 for guidance.		1
9	CWB	X1-X8	Label present and new right of way on cross sections. See IB 2012-1 for guidance.		1

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 72	**Rd./Rte. Name:**	Carlisle Whitmire Highway	**File No.:**	44.039441
County:	Union	**Project Description:**	Replace Bridge over Cane Creek		
Type of Submittal:	Final Design	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12/17/12	**Reviewed By:**	KS		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	KS	3	Pavement Design should be approved by Pavement Design Engineer.		
2	KS	5	General Construction Note should be updated to current note using the "Deputy Secretary for Engineering" title.		
3	KS	Cross Sections	Add a line to connect travelway to earth shoulder on cross sections.		
4	KS	Cross Sections	Correct labeling of side slopes on cross sections, multiple stations show a 6:1 side slope however these do not appear to be the same slope.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

In-House Enhancement

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-91	**Rd./Rte. Name:**	Church Street	**File No.:**	32.039386
County:	Lexington	**Project Description:**	S-91 Sidewalk Enhancement		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	6/28/12	**Reviewed By:**	RLK		

Comment No.	Comment	Response
1	Refer to IB 2011-5 regarding title sheets for consultant projects. Title sheet should include consultant stamp/logo, Environmental Permit Information box and updated CALL 811 box.	
2	Recommend following HDM Figure 34.1B regarding the numbering order and location of drainage sheets.	
3	Include north arrow on title sheet location map (PPG page 1-3).	
4	Typical sections should be continuous throughout the project. Typical sections #3 and #4 overlap from station 32+62.35 to 32+74.66. Typical section #3 shows curb and gutter through this area while typical section #4 shows a ditch between the existing roadway and sidewalk.	
5	Beginning and ending project stations shown on title sheet should agree with plan and profile sheets.	
6	Mileage shown on title sheet should be given to 3 decimal places (0.669 miles).	
7	Tract 60 appears to need permissions based on plan sheet 6. Verify permissions and revise Right-of-Way Data Sheet if needed.	
8	Tract 15 appears to need slope permission based on plan sheet 7. Verify permissions and revise Right-of-Way Data Sheet if needed.	
9	If driveway construction (tracts 42, 43, and 44 on sheet8) extends beyond right-of-way, show entrance construction permission on Right-of-Way Data Sheet. Unable to determine based on plan sheets.	
10	Show curb grade profile data on Reference Data Sheet. Also give curb grade profiles within plans.	
11	Include utility owners notes on first plan sheet.	
12	Silt fence is generally only placed in fill sections. Plan sheets detail silt fence being placed in cut sections.	
13	Include alternate pipe information on plan sheets (IB 2099-4).	

Comment No.	Comment	Response
14	It is generally undesirable and not a practice of SCDOT to have sidewalk adjacent and flush to roadways without any type of separation (i.e. grass buffer, curb, etc.). Typical section #1 and #2 as designed introduce concerns regarding shoulders and pedestrian safety. Consider including separation between the pavement and sidewalk to alleviate any future problems regarding the sidewalk.	
15	The 3' section of asphalt labeled as asphalt curb on typical section #2 is actually valley gutter (HDM Figure 22.2D).	
16	Present right-of-way notes shown on plan sheets should include the project number and dates.	
17	Label new right-of-way on cross sections where applicable.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC-27	**Rd./Rte. Name:**	SC-27	**File No.:**	18.041196
County:	Dorchester	**Project Description:**	Ridgeville Sidewalk Enhancement		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	03/14/2012	**Reviewed By:**	AH, TD, JT		

Comment No.	Comment	Response
1	The Plan Cover shows the File number as 18.04196 instead of 18.041196. Adjust accordingly.	
2	The sidewalk shown on the Typical Section should be labeled 50:1 Max.	
3	Right of Way should be verified throughout the entirety of the project. There is no verification from roughly station 33+00 to station 39+00 on the sidewalk side of the project.	
4	The note in the legend on the Typical Section implies there is a Concrete driveway from station 31+12.08 to Station 33+52.81. Clarify the purpose of this driveway.	
5	For unpaved drives adjacent to sidewalk, pave driveway apron to existing right-of-way line to minimize debris spilling onto the sidewalk.	
6	Station 39+00 L. Provide a blended transition with detectable warnings at the sidewalk terminus.	
7	Where sidewalk crosses existing driveways, the need may occur to reconstruct some or all driveways as there must be a minimum 4-foot wide, maximum 2% cross slope, pedestrian accessible element.	
8	Sidewalk, as proposed, ties into existing sidewalk left of station 13+68. The existing sidewalk leads off of the right-of-way. The adjacent building is shown as being within our right-of-way. The Program Manager and the District should consult concerning the appropriateness of this tie-in.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-123/S-77/S-761	**Rd./Rte. Name:**	Cooper Street/Wall Street/Presidents Circle	**File No.:**	8.041554
County:	Berkeley	**Project Description:**	Monck Corner Trail		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10-11-12	**Reviewed By:**	VHM		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	VHM	6-10	Ensure that sidewalks end at street intersections on plan sheets according to Instructional Bulletin 2001-6.		
2	VHM	6	Show curb ramp or parallel ramp for sidewalk at intersection of US 17A and S-123 Cooper Street (See Standard Drawing 720-910-01 and Guide for the Planning, Design, and Operation of Pedestrian Facilities page 83 http://iwww.dot.state.sc.us/PreConstruction/Support/roadway/documents/pedestrian/pedestrian.pdf). Note: use a partial section or a blow-up section to help clarify the intent of this section of the design– sheet 6.		
3	VHM	6	Show curb ramp or blended transition for sidewalk at intersection of Road S-123 and S-77 (See American with Disabilities Act Transition Plan page 15 http://www.access-board.gov/prowac/draft.htm#Text Chapter R207, R105.5, and R221) Note: use a partial section or a blow-up section to help clarify the intent of this section of the design - sheet 6.		
4	VHM	6	Show elevation for sidewalk at Sta. 11+00.00 on sheet X1 for Road S-123 compared to sidewalk profile on sheet 6.		
5	VHM	6	Show correct elevation for sidewalk at Sta. 17+00.00 and Sta. 18+50.00 on sheet X4 for Road S-123 compared to sidewalk profile on sheet 6.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-183/184/207/Trail	**Rd./Rte. Name:**	Sawmill Branch Trail	**File No.:**	18.040441
County:	Dorchester	**Project Description:**	Sawmill Branch Trail, Phase 5		
Type of Submittal:	RW	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	9/12/12	**Reviewed By:**	RLK, TD		

Comment No.	Comment	Response
	Roadway comments:	
1	Provide a scale on typical section sheets or show "NTS."	
2	Provide all needed standard drawings on typical sections, i.e. 720-105-01 and 720-405-00, etc.	
3	Label sidewalk and shared use path cross slope on typical sections as "50:1 MAX."	
4	Recommend labeling and using proper NPDES line styles near tract 25, 54, and 60-63.	
5	Place alternate pipe information in plans (IB 2009-4).	
6	Ensure bicyclists have proper accommodations at each end of the shared use path and that these accommodations comply with AASHTO's Guide for the Development of Bicycle Facilities.	
7	Elevations shown on profile sheets should match those found in cross sections. See station 22+00 (sheets 7 and X9).	
	Bicycle and Pedestrian comments:	
8	For each driveway encountered, provide reference to appropriate driveway standard drawing. Each driveway will need to provide 4-foot wide pedestrian accessible element per PROWAG.	
9	Sidewalk must, by SCDOT ADA policy, begin with a curb ramp for the curb at Main Street (sheet 6).	
10	US RTE 17 is actually US RTE 17 ALT (sheet 6).	
11	Driveway between STA 6+75 LT and STA 7+70 LT (approx.) must contain 4-foot wide pedestrian accessible element per PROWAG. If existing driveway meets this condition, consider marking it with crosswalk markings to discourage having it blocked by parked cars. Delete Detectable Warning Surfaces for this (and most) driveways (sheet 6).	
12	For curb ramps at North Magnolia Street, reference SCDOT Standard Drawing 720-910-03 (sheet 6).	

Comment No.	Comment	Response
13	At the intersection with S-188, suggest having the sidewalk approaching from the south intersect the road corner radius nearer to the center of the intersection so the southern sidewalk will align better with the section to the north (which appears more constrained). This will make for a simpler crossing (sheet 7).	
14	Sidewalk appears to conflict with existing parking area for Parcel (49) and once constructed will probably be often blocked by parked cars for this business unless something is changed (sheet 7).	
15	Review access for Parcel (62). This appears to be a dentist's office or similar. Northern driveway (of the two) accesses three parking stalls, each of which would require motorists to back over sidewalk when leaving business, creating a safety concern for pedestrians (sheet 7).	
16	If the block of S-207(E. 3rd North St.) between North Gum Street and SC-165 is within the project limits, then insure that detectable warning surfaces are added to the existing sidewalk at the intersection with SC-165 (sheet 8).	
17	Provide some means to exclude motor vehicle traffic from shared use path along Sawmill Branch (sheet 8).	
18	The graded shoulder on each side of the shared use path should be at least 3 to 5 feet wide with a maximum cross-slope of 1V:6H (sheet 9).	
19	Detectable warnings must be provided where shared use path intersects US-78 (sheet 9).	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-11	**Rd./Rte. Name:**	Lee Ave.	**File No.:**	25.041197
County:	Hampton	**Project Description:**	Enhancement		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	2/29/2012	**Reviewed By:**	SSS, JT		

Comment No.	Comment	Response
1	Add additional sheets prior to letting to ensure that this project will be consistent with Phase I.	
2	Title sheet and the plans cover have different file numbers. Revise accordingly.	
3	Title sheet and typical section sheet have different names for the road, Lee Ave. or Lee Street. Revise accordingly.	
4	Add traffic data if applicable	
5	"Remove Tree" note around sta. 13+50 needs an arrow pointing to the tree to be removed.	
6	Add north arrow to plan sheet	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-200, S-276, S-510,	**Rd./Rte. Name:**	College Street, Susan Street, College St. Ext.	**File No.:**	3.040602
County:	Allendale	**Project Description:**	Sidewalk Construction Phase II		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	4/26/12	**Reviewed By:**	KS,TD		

Comment No.	Comment	Response
	ROADWAY DESIGN COMMENTS	
1	Mileage incorrect for S-510.	
2	Missing Hydraulic Design Reference Label and Road Design Reference Label.	
3	Adjust stationing for S-275 Hill Street to match between Title Sheet, Typical Section, and Plan Sheets.	
4	Show Construction Limits and NPDES lines on Plan Sheets.	
5	Quantity for Concrete Sidewalk appears low.	
6	Unable to completely verify quantity for Concrete Driveway. Any pay item not detailed in plans should be have the total quantity shown on the General Construction Note	
	BICYCLE AND PEDESTRIAN COMMENTS	
7	On the Typical Sections, do not place concrete sidewalk abutting the edge of pavement and flush with the edge of pavement. Place sidewalk adjacent to the right-of-way line, or nearly so.	
8	Provide a minimum 5-foot separation between the edge of pavement and the edge of the sidewalk. Where this is not possible, coordinate with the municipality and the District Traffic Engineer to have NO PARKING signing placed.	
9	Where the above cannot be accomplished, the addition of curb and gutter is recommended.	
10	The use of Match Lines on the plan sheets is needed.	
11	At the corner of US-278 and College Street, show the existing sidewalk and ramps on US-278. Indicate beginning the project as a tie to these existing items; show demo of the existing ramp on US-278 as that type of ramp will no longer be appropriate now that sidewalk is being added to College Street. Sidewalk and curb ramps should be placed behind existing radius curb line.	
12	In accordance with ARMS, locate and depict driveway access to Parcel (1). Where driveway crosses sidewalk, sidewalk must not exceed 2% cross slope.	
13	At the northern corner of College and Flat Streets, there exists a	

Comment No.	Comment	Response
	drainage grate that should be shown on the plans. Detail a blended transition for the juncture of the sidewalk and the street (in each direction) here.	
14	Due to the unusual nature of Flat Street being a divided road, recommend marking the crosswalk joining these two sidewalk segments. Provide detail of a radius curb line at the western corner of College and Flat Streets, again with a blended transition.	
15	At STA 14+50 RT of College Street, and again near STA 16+50 RT, unnamed "CITY STREET(s)" intersect. Where sidewalk ends/begins at the edges of this street, detectable warnings are required since this is a public street.	
16	At the intersection of College Street and Gillyard Street, verify if Gillyard Street has a sidewalk on the right side, as it appears one has been depicted on the plans. It is *recommended* that an accessible path be provided to allow disabled pedestrians coming to and from Gillyard Street to have access.	
17	Near STA 16+50 RT another CITY STREET intersects College Street and here the entrance does not appear to coincide with the survey location. Verify that such road exists as it does not show up at all in Google Streetview.	
18	On College street at the intersection with Wagner Street, provide blended transitions on each corner. Recommend bringing sidewalk on Wagner Street to wrap around a small radius and onto College Street, providing a partial blended transition as the sidewalk is shifted from the back of right-of-way towards the centerline.	
19	At the beginning of the sidewalk run along Susan Street, locate sidewalk adjacent to the right of way line. Consider placing bollards around the existing catch basin AT STA 10+25RT. Each driveway should be carried with a 4-foot wide, 2% cross slope (max) accessible element across it.	
20	As sidewalk continues from Susan Street onto College Street Extension, placement of curb and gutter is highly recommended if possible. Otherwise locating the sidewalk at 0 to 1 foot off the right of way line is recommended.	
21	Consider aligning sidewalk along College Street Extension so as to pass over existing catch basins to be retain.	
22	End sidewalk run along College Street Extension as a blended transition at Unknown Street At STA 16+94.55RT. Is Unknown Street S-3-510?	
23	When Wagner Street passes from Sheet 12 to Sheet 13, the right-of-	

Comment No.	Comment	Response
	way goes from "PRES 15' R/W" to " 30' R/W "—recommend that sidewalk be placed at back of right of way, or barring that recommend use of sidewalk with integral curb (See SCDOT Std. Dwg. 720-105-01, Detail (5)). This run appears to have no drainage structures in this segment.	
24	Along Hill Street shift sidewalk to abutting right-of-way line. Terminate sidewalk at corners using a blended transition.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	No Name Creek Greenway	**Rd./Rte. Name:**	No Name Creek Greenway Trail	**File No.:**	21.041570
County:	Florence	**Project Description:**	No Name Creek Greenway Trail Enhancements		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	7/17/12	**Reviewed By:**	RLK		

Comment No.	Comment	Response
1	Recommend revising beginning and ending longitude coordinates to correspond to the beginning and ending project arrows shown on the location map. As drawn, the ending coordinates should be higher than the beginning coordinates.	
2	Give begin and end stationing on title sheet, typical sections and plan sheet.	
3	All applicable signatures/initials and dates should be shown on final construction plans.	
4	Recommend including Hydraulic Design Reference Label on title sheet.	
5	Ensure the proper pedestrian accommodation (curb ramp, detectable warning, etc.) is designed at the end of the project to tie to Beltline Drive or an existing pathway.	
6	Show cross slope of trail on typical section sheet.	
7	Refer to IB 2006-10 regarding erosion control pay items when the quantity for silt fence exceeds 2000 LF.	
8	If applicable, include Right of Way Data Sheet in plans.	
9	Show path widths on plan sheet as indicated on typical section.	
10	Include right-of-way notes and utility notes on plan sheet.	
11	Include Reference Data Sheet in plans and show alignment control note on plan sheet. Sheet 5 alludes to the Reference Data Sheet.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 28 Bus.	**Rd./Rte. Name:**	Mechanic Street	**File No.:**	04.037590
County:	Anderson	**Project Description:**	SC 28 Sidewalk Enhancement		
Type of Submittal:	RW/Const.	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	7/5/12	**Reviewed By:**	RLK, SSS		

Comment No.	Comment	Response
1	The mileage shown on the title sheet does not agree with PES.	
2	Complete Environmental Permit Information on title sheet. Construction plans should show approval for RW Acquisition, SCDOT applicable initials and information relating to the EOR.	
3	Index of sheets details plans containing twenty-eight sheets. Twenty-six sheets were submitted during the time of review.	
4	Recommend adjusting the "begin" project arrow shown on title sheet based on plans. Plans detail sidewalk/curb being installed starting at the intersection of US 76.	
5	A review of major quantities was not completed at this time as the Summary of Estimated Quantities did not appear to match plan sheets regarding all pay items (i.e. drainage, etc.) and the inclusion items shown on the General Construction Note Sheet do not appear to be completed. A few quantity issues were observed and are shown in subsequent comments.	
6	The Summary of Estimated Quantities Sheet gives a Silt Fence quantity of 2366 LF while the General Construction Note Sheets shows 2336 LF.	
7	Summary of Estimated Quantities should match quantities given in PES. See Excavation quantities.	
8	Include pay items for Right of Way Plat and Right of Way Marker (see PAM 8).	
9	As US 28 is classified as an urban arterial, 10' shoulders (2' paved) should be provided. Due to typical #1 not using curb and gutter, the sidewalk and therefore pedestrians will be within the shoulder area.	
10	Typical section should label sidewalk cross slope as "50:1 MAX."	
11	Place alternate pipe information within plans (IB 2009-4).	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 28 Business	**Rd./Rte. Name:**	SC 28 Business	**File No.:**	04.037590
County:	Anderson	**Project Description:**	SC28 Business Sidewalk		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	12/11/12	**Reviewed By:**	RLK, TD		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RLK	1	Provide EOR information and approval for right-of-way acquisition on title sheet.		
2	RLK	-	PES shows several quantities that are not given in the Summary of Estimated Quantities (pipe, drainage structures, rip-rap, geotextile, etc.), all with quantities of 1 Unit. Verify if these pay items are needed and show in Summary of Estimated Quantities if applicable.		
3	RLK	-	Determine if a pay item for Bonds and Insurance should be included in PES (IB 2009-6).		
4	RLK	3	Recommend providing applicable standard drawings on typical section (drives, curb ramps, etc.).		
5	RLK	5	Revise pay item unit for Maintenance Stone shown on General Construction Note Sheet from "SF" to "TON."		
6	RLK	5	Revise pay item unit for Permanent Construction Signs shown on General Construction Note Sheet from "TON" to "SF."		
7	RLK	7	Provide silt fence from beginning of construction to approximately station 542+50 RT (within the 33' fill section).		
	TD	6	No work is (any longer) on this sheet, nor do the project limits extend onto the area depicted on this sheet. Can Sheet 6 be eliminated?		
	TD	7	Confirm that the pedestrian accessible element (4'0" wide, 2.0%MAX cross slope, etc.) is carried across the driveway between STA 541+00 RT and STA 541+60 RT so that the new sidewalk adequately ties to the existing. The same goes for the major driveway between STA 543+55 RT and STA 544+40 RT, as well as any driveways the sidewalk crosses. Otherwise driveway must be rebuilt.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
	TD	7	At the signalized intersection with Woodburn Road (LT; S-4-175; having a sidewalk on the north side) and Meehan Way (RT; a driveway which could be considered to function as a private street; having sidewalks on both sides) greater design consistency should be provided on the NW, NE, and SE corners since they involve sidewalks. Particularly those on the NE and SE corners should depict the existing sidewalk approaches more clearly and require the contractor to tie to these walkways. It is unclear why the sidewalk should not be wrapped around the radius on the SE corner as is being done on the NE. The type of curb ramps being proposed for each corner (referenced to the appropriate SCDOT Standard Drawing) is not stated nor illustrated. This is a case where detectable warnings would be provided for the private driveway/street RIGHT since it forms one of the legs of a 4-way intersection and its traffic controlled by a signal. In accordance with SCDOT ADA Transition Plan, provide a curb ramp with detectable warnings for the sidewalk arriving from the west on Woodburn Road.		
	TD	7	Have District Traffic Engineer determine if there are any reasons why crosswalks should not be marked at this signal in accordance with usual practice.		
	TD	7	At intersection with Shirley Street the blended transitions at each approach of the sidewalk must have detectable warnings.		
	TD	8	Add to the existing note (shown at STA 555+00) "DO NOT ALLOW NEW SIDEWALK TO BE PLACED IMMEDIATELY ADJACENT AND FLUSH WITH EXISTING SHOULDER PAVEMENT—REMOVE SHOULDER PAVEMENT AS NECESSARY AS DIRECTED BY ENGINEER" New sidewalk flush with road or shoulder pavement creates an accessibility issue for blind pedestrians.		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
	TD	Various	Have District Traffic Engineer evaluate placing delineators between edge of roadway and near edge of sidewalk through horizontal curve between POC STA 547+00 and PT STA 555+76.58 to discourage motorists from drifting onto sidewalk where sidewalk is placed on the outside of this curve.		

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-13	**Rd./Rte. Name:**	Remount Road	**File No.:**	10.038868
County:	Charleston	**Project Description:**	S-13 Remount Road Enhancement		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	6/1/2012	**Reviewed By:**	T.E., C.W.B.		

Comment No.	Comment	Response
1	Show Mileage as N. / A. on Title sheet.	
2	Show Latitude and Longitude in Degrees, Minutes, and Seconds format in lieu of decimal format. See sheet 1.	
3	Circle Yes or No for indication of Railroad Involvement. See sheet 1.	
4	Add Environmental Permit Information block to title sheet. See IB 2011-6.	
5	Add name of map and map number under bottom right hand corner of location map. See sheet 1. Charleston Metropolitan Area Map Sh. 1	
6	In the Landscaping Plan Legend revise comment for symbol LIRSS to "1 FT. APART O.C. TO BE PROVIDED BY THE CITY OF NORTH CHARLESTON; CONTRACTOR SHALL FURNISH BID OF THE COST OF INSTALLATION ONLY". See sheet L1.	
7	Reprint sheet number L3 needs to be re-stamped for clarity.	
8	In the Landscaping Plan Legend Under the Ball /Cont. column revise B &B to # 15 Cont. for Symbol LAOS. Under the Ball /Cont. column revise B &B to # 15 Cont. for Symbol ILNS. See sheet L4.	
9	In the Landscaping Plan Legend revise comment for symbol LIRSS to "1 FT. APART O.C. TO BE PROVIDED BY THE CITY OF NORTH CHARLESTON; CONSTRACTOR SHALL FURNISH BID OF THE COAST OF INSTALLATION ONLY". See sheet L4.	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 162	**Rd./Rte. Name:**	N.A.	**File No.:**	10.040764
County:	Charleston	**Project Description:**	Sidewalk Enhancement		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/10/2012	**Reviewed By:**	CWB		

Comment No.	Comment	Response
1	No initials or dates are shown for Hydrology, Geotechnical, or the Design Manager. See title sheet.	The title sheet will be initialed and dated by all necessary staff prior to submittal to OC.
2	Engineer of Record needs to sign and date title sheet in the appropriate box.	The title sheet will be signed and sealed prior to submittal to OC.
3	Right of Way Acquisition box on title sheet needs to be signed.	The title sheet will be signed for R/W acquisition prior to submittal to OC.
4	Very that site excavation will be used inplace of unclassified and borrow excavation which is shown in detail on plans. Revise plans accordingly. See sheets 2, 6,7 and X1-14.	The District has requested that the Site Excavation pay item be used on small Enhancement projects. The earthwork quantities were removed from the profiles and cross sections.
5	Use pay item 8151203 Hydraulic Erosion Control Product (HECP) Type 3 for slopes equal to are less than a 2:1. See sheet 2, 3, 3A, 5 and cross sections. See IB 2011-1 for guidance.	The SEQ and PES were revised to reflect Type 3 HECP.
6	Unable to locate Link ID shown for 72'- 18" SW Pipe right of station 1058+13.25. See sheet D2.	The 18" driveway culvert referenced is not included in the pipe schedule but all pertinent information is included in the label.
7	The quantities for the pay items listed below are low. 7143615 15" Smooth Wall Pipe 42.000 LF 7143618 18" Smooth Wall Pipe 119.000 LF 7191280 Catch Basin – Type 9 Special MH with Modified Box No. (1) 7.000 EA 7199100 Beveling of Pipe End 4.000 EA 8041020 Rip-Rap (Class B) 105.000 TON 8048205 Geotextile for Erosion Control Under Riprap (Class 2) Type B 131.000 SY 8153000 Silt Fence 1250.000 LF 8153090 Replace / Repair Silt Fence 125.000 LF 8154050 Removal of Silt Retained by Silt Fence 313.000 LF	There is an exception to the project between 1038+25 and 1044+27.60. Quantities for improvements within this area are NOT included in the SEQ or PES. If the project comes in under budget following the Letting the additional quantities will be added back into the contact via an addendum.
8	Add quantity for Clearing and Grubbing within Right of Way. See sheet 2.	Clearing and grubbing was added to the SEQ and PES.
9	Add Rumble StripE due to the 45 mph speed limit. See sheets 2, 6 and 7. See E.D.M. No. 53 for guidance.	We are not proposing rumble strips at this time as we are not providing any roadway improvements as part of this Enhancement project.
10	Add traffic data to title sheet. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	Traffic data has not been provided for the project since no roadway improvements are proposed.

Comment No.	Comment	Response
11	Is a 2:1 back slope located in front of the sidewalk in compliance with the department practices? See sheets 3and 3A. See the Roadside Design Guide section 3.2.4 Drainage Channels p. 3-10, 3-11 for guidance.	It is within Department practices to provide a section of non-recoverable slopes between two transversable areas as provided on the typical section.
12	Slope of shoulder is 30:1 when sidewalk is not present. See sheet 3. See HDM for guidance.	The shoulder slope was revised to 30:1.
13	The depth of the earth gutter shown on typical sections is not in agreement with the vertical scale. See sheets 3 and 3A.	The plans were revised to reflect the typical sections are not drawn to scale.
15	Show point of grade on typical sections. See sheets 3 and 3A.	Point of grade labels were added to the typical sections.
16	Show design speed as NA on typical sections. See sheets 3 and 3A.	The design speed was marked "NA" as suggested.
17	Add standard drawing reference for sidewalk to typical section sheet 3A. See the SCDOT book of standard drawings.	It is not a standard practice to reference all applicable standard details on the typical sections. Otherwise, the contractor could assume they only had to abide by standards when individually referenced.
18	The beginning grade of 39.19% for the embankment on the right of station 1038+25.00 is within the clear zone of SC 162. Should the 39.19% grade be considered a hazard? See sheet 6. See HDM for guidance.	The embankment end will be treated as typical for driveway culverts with the outfall pipe having a beveled end section.

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US 17	**Rd./Rte. Name:**	Savannah Highway	**File No.:**	10.040394
County:	Charleston	**Project Description:**	Median Enhancement		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	11/16/2012 *	**Reviewed By:**	CWB, TE, TD		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	CWB	1	The Initials and date for RPG-Road, Hydrology, Geotechnical, and Preconstruction Support – Road needs to be added to the title sheet.		1
2	CWB	1	The Signature and Date for the Engineer of Record needs to be added to the title sheet.		1
3	CWB	1	The Hydraulic Design Reference Label is not shown on title sheet.		1
4	CWB	2	Add quantity for Stabilized Construction Entrance if warranted. See sheet 2.		1
5	CWB	2	Add quantity for Clearing Grubbing within Roadway. See sheet 2.		1
6	TE	2	Item number 8110001 could be removed from sheet 2 if the attached spreadsheet is used to revise the landscaping plan plant schedule.		1
7	TE	2	Section 3.17 of the landscaping specs should be modified to read as follows: The method of measurement and payment shall be based on a lump sum basis under the pay item number 8110000. Landscaping. This item shall include plants, mulch, fertilizer, nitrogen, lime, weed cloth, herbicide, topsoil and all other landscape related work and materials.		1
8	CWB	3	Pavement design needs approval by the Pavement Design Engineer. See typical section sheet 3A.		1

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

9	CWB	3	Add a note to the Typical Section and General Construction note stating the cross slope of any additional sidewalk should be 50:1 Maximum. See sheets 3A and 5.		1
10	CWB	5	Use the latest General Construction Note. See sheet 5. See the attached file for the latest General Construction Note.		1
11	CWB	5	The quantity for 2"Schedule 80 PVC Conduit (Directional Bored) needs to be revised. The quantity shown on the Summary of Estimated Quantities sheet is 30.000 LF. The quantity shown on the inclusion sheet is 100.000 LF. See sheet 2 and sheet 5.		1
12	CWB	5	The quantity for Aluminum Handhole Box needs to be revised. The quantity shown on the Summary of Estimated Quantities sheet is 1.000 EA. The quantity shown on the inclusion sheet is 3.000. See sheets 2 and 5.		1
13	CWB	5A	Add Datum reference for benchmarks. See Reference Data sheet.		1
14	CWB	6	Rotate bearing 180 degrees shown on US 17. Bearing needs to read from left to right. See sheet 6.		1
15	CWB	6	The storage length of 120 feet is not sufficient in urban areas. The minimum storage length for a left-turn lane is 150 feet. See sheet 6. See SCHDM chapter 15 for guidance.		1
16	CWB	6	The reverse curve taper of 300 feet should be 480 feet based on a 35 mph design speed. See sheet 6. See SCHDM chapter 15 for guidance.		1
17	CWB	6	No profile grade elevations shown.		1

18	TD	6	Crosswalk at approximate STA 72+00 should be made perpendicular to the centerline to shorten the crossing distance, minimize pedestrian exposure to motorists, and save on cost of decorative paving.		1
19	TD	6	Shifting this crosswalk slightly to the west is recommended to allow better visibility of existing pedestrian signal head which in its current position is too easily eclipsed by buses or large trucks. Strategic choice of location for curb ramps will avoid need to involve utilities such as water meters and pole guy wire mountings.		1
20	TD	6	Consider curb extension on the south end of the crosswalk to assure no vehicles park within 25 feet of the crosswalk (or 30 feet of the approach to the signalized intersection) per SECTION 56-5-2530 of the S. C. Code of Laws.		1
21	TD	6	The intersection of Savannah Highway and Daniel Street occurs within project limits—provide/upgrade sidewalk curb ramps on each side of Daniel Street and each side of the Savannah Highway as this remains a legal pedestrian crossing point. Sidewalks exist on Daniel Street.		1
22	TD	6	Upgrade sidewalk curb ramps on either side of Radio Road within the project limits.		1
23	TD	6	Recommend consideration of marking crosswalks across side streets.		1
24	TD	TC1	Traffic Control plan shows "MAINTAIN PARKING" in locations where parking is not legal (see above).		1
25	TE	L1	The median is only 11.5 feet wide and the speed limit is 35 MPH. Instead of planting palmettos, it is my suggestion that hybrid crape myrtles could be substituted.		1

26	TD	PM1	Permanent Pavement marking plan shows parking allowed too close to signalized intersections.		1
27	CWB	N./A.	No cross sections in plans at time of review.		1
*			**See the additional comments below as of 11/20/12 Per John Thomas's Review.**		
28	JT	3B	The Standard Drawing number 802-405-00 should be included on the typical section in reference for the planted median.		1
29	JT	6	Plans call out for a curb ramp type DW1 at Sta. 72+00 L. DW1 may pose a tripping hazard, and a perpendicular ramp with side flares should be considered.		1
30	JT	6	Sta. 72+50 R — at this acute angled corner, a custom designed, blended transition might perform better than a standard curb ramp design.		1

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 27	**Rd./Rte. Name:**	Givhans Road/Church Street	**File No.:**	18.041196
County:	Dorchester County	**Project Description:**	Sidewalk Enhancement		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	6-22-12	**Reviewed By:**	VHM		

Comment No.	Comment	Response
1	Pay item 1080300 CPM Progress Schedule should not be listed on the Estimated Quantity Sheet (See Instructional Bulletin 2005-1).	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-1342	**Rd./Rte. Name:**	Aviation Ave.	**File No.:**	10.039057
County:	Charleston	**Project Description:**	Enhancement		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5/31/2012	**Reviewed By:**	SSS, TE		

Comment No.	Comment	Response
1	Show Mileage as N. / A. on Title sheet.	
2	Show Latitude and Longitude in Degrees, Minutes, and Seconds format in lieu of decimal format. See sheet 1.	
3	Circle Yes or No for indication of Railroad Involvement. See sheet 1.	
4	Add Environmental Permit Information block to title sheet. See IB 2011-6.	
5	Add name of map and map number under bottom right hand corner of location map. See sheet 1. Charleston Metropolitan Area Map Sh. 1	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-11	**Rd./Rte. Name:**	Lee Ave.	**File No.:**	25.041197
County:	Hampton	**Project Description:**	Enhancement Project		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	9/19/2012	**Reviewed By:**	CWB, TD, JT, TE		

Comment No.	Comment	Response
1	Initials and dates are needed for Preconstruction Support - Road and the RPG - Design Manager. See sheet 1.	All initials will be provided prior to submittal to OC.
2	Signature and Date for Engineer of Record need to be added. See sheet 1.	The engineer of record will sign all sheets prior to submittal to OC.
3	Add quantity for Stabilized Construction Entrance if warranted. See sheet 2. See IB 2005 -1 for guidance.	Quantity for a stabilized construction entrance was added to the SEQ, GCN and in PES.
4	Revise the stations shown in the design speed box to agree with plans. See sheet 3 and 7.	The stations were updated regarding design speed on the Typical Section.
5	The map at http://smpfalcon/scdot-falcon-prjs/maps/city/cal/varnville.cal would have been a better choice for the title sheet than the one at http://dbw.scdot.org/GISMapping/ViewPdfFile.aspx?Fname=pdfs/City/Hampton_and_Varnville_City.pdf. The one used does not identify "Lee Street' or Road S-25-11 as such. ITMS corroborates that this street is indeed S-25-11 and on the SCDOT system.	The map on the title sheet was created using the title sheet template. We prefer to maintain the map as shown.
6	Compare "ADA SIGN DETAIL" shown on Sheet 8 to SCDOT Standard Drawing 651-110-00 (http://www.scdot.org/doing/technicalPDFs/standardDrawings/sd12_04_600_Maintenance_Traffic_Control.pdf). Typically we do not mount signs in concrete. Also it is our practice to place such signs on 2P (2 pound per linear foot) U-sections posts (as reflected in the pay note at bottom of this detail). Yet the note at the pole indicates "2"x2" STEEL TUBE WITH WELDED TOP CAP ANCHORED IN SOLID CONCRETE. So are we buying steel tube and paying for it as U-section post?	The label on the detail was modified to call for U-SECTION POST instead of the previously shown steel tube. The sign is being mounted at parking adjacent to new sidewalk, hence the concrete.
7	On Sheet PM1 why is the angle parking accessible space provided with a blue thermoplastic stripe, a sign, and a pavement marking symbol, and when the parallel accessible parking space that is being provided within the project limits on Maple Street not getting any of those features? *Response: If the space on Maple Street is "an unmarked accessible spot" how do they plan on keeping ineligible motorists from using it? It must be marked (sign included) to count towards the minimum number of accessible spaces for that block.*	The space on Maple Street is an unmarked accessible spot.

8	Please confirm that the ITEM NUMBERS on sheet L-1 will substitute for no numbers for landscaping on the SUMMARY OF ESTIMATED QUANTITIES sheet. Shouldn't there be a note to sheet 2 to see the landscaping quantities on L-1?	The landscaping quantities are being shown as lump sum under pay item 8110001 as detailed in the special provision. It should be understood that the landscaping details accompany the landscape quantities shown on L1.
9	Sheets L1 & L-2 needs to be stamped and signed by a Licensed Architect (me). I went ahead and put my stamp on these pages.	Timothy will sign and seal the landscape sheets prior to submittal to OC.
10	On sheet L1, the large liriope planting bed near the large live oak tree is probably larger than 183 square feet. Please measure this area to confirm size, and adjust quantities if necessary.	The planting bed near the large live oak tree was verified to be 183 sf.

Consultant Enhancement

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-438 & S-161	**Rd./Rte. Name:**	Anthuan Maybank Drive & Church Street	**File No.:**	22.039756
County:	Georgetown	**Project Description:**	Safe Routes to School		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8-20-12	**Reviewed By:**	VHM		

Comment No.	Comment	Response
1	Add Erosion Control Data sheet EC-7 to Index of Sheets on title sheet (See Erosion Control Data sheet EC-7).	
2	Add Cross Section sheets X-2- X-17 to Index of Sheets on title sheet (See cross section sheets sheet X-2- X-17).	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-98	**Rd./Rte. Name:**	Tega Cay Drive	**File No.:**	46.040653
County:	York	**Project Description:**	Tega Cay Drive Sidewalk Enhancement		
Type of Submittal:	Preliminary/ROW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	4/19/12	**Reviewed By:**	RLK, TD		

Comment No.	Comment	Response
1	Revise project number shown on project cover sheet (DT(004)) to match the one shown on title sheet (DT11(004)).	
2	Use new consultant title sheet that includes Environmental Permit Information box as well as an updated CALL 811 box (IB 2011-5).	
3	Title sheet should indicate there are no equalities in stationing by showing "NONE."	
4	Include Design Reference Label (IB 2003-8) and Hydraulic Design Reference Label (IB 2009-3) on title sheet.	
5	Include applicable standard drawing numbers on typical section (i.e. drives, curb ramps, etc.).	
6	Include tract 22 on Right of Way Data Sheet. It is shown on Strip Map and Plan Sheet.	
7	Present right-of-way notes given on plan sheets should include file number, project number and date.	
8	NPDES lines should be shown on plan sheet (HDM Page 30.3(4)).	
9	Include alignment control note on plan sheet (IB 1997-11).	
10	Sheet 3—Label sidewalk cross slope as 50:1 (MAX). Typical Sections are usually shown to a larger scale. On the detail of the landing area, "PEDESTRIAN" is misspelled as "PEDISTRIAN."	
11	Pedestrian Landing Areas are wise additions to a walkway which will have a steep grade (>10%). Yet if the Pedestrian Landing Areas are to have a Maximum slope of 50:1 (any direction) per the note on the Typical Section Drawing, how does the plane of the Pedestrian Landing Area abut the plane of the proposed sidewalk run without creating surface discontinuities which would render the Pedestrian Landing Area inaccessible?	

Comment No.	Comment	Response
12	Sheet 6—Due to the excessively small scale of the drawings, the note for the walkway in the median (referencing Std. Dwg. 720-910-02) and the note for the curb ramp at the corner radius area of Tega Cay Drive and Catamaran Drive (referencing Std. Dwg. 720-910-03) are easily confused. With respect to the latter, a detail drawing might be useful to emphasize that the existing ogee curb and gutter is an accessibility barrier (just as is vertical-face curbing) and must be removed to construct the curb ramp.	
13	Sheet 6—Where the crossing of the median island is being constructed, there exists (per Google Street view) a considerable amount of median landscaping in excess of 18 inches in height. Evaluate pedestrian/motorist sight distances at and on the approaches to this intersection that might be compromised due to this landscaping. Remove/adjust the landscaping as necessary for optimum pedestrian safety at this unsignalized intersection.	
14	Sheet 6—Near STA 51+30 Left, indicate the removal of the existing curb and gutter where walkway meets the end of the crosswalk in the roadway. Only one ramp of the parallel style curb ramp shown on Std. Dwg. 720-910-01 is appropriate here since the sidewalk does not continue to the west at this time. A larger scale detail of this special situation is highly recommended.	
15	Sheet 6—regarding the steps near STA 50+90LT, while showing the steps on the cross sections is appropriate, the more detailed design is recommended, and it should appear on (or referenced from) the plan sheets. Based on what appears on the cross section (Sheet X1) the steps should be shifted in location such that a clear width of walkway behind the curb on Tega Cay Drive is maintained at a minimum of 5 feet to allow for possible future construction of walkway on the south side of Tega Cay Drive, as well as to minimize and remove potential clear-zone issues. The detail for the steps should have the note "STEPS TO CONFORM WITH SCDOT STD. DWG. 702-105-00 AND ADAAG SECTION 4.9 (STAIRS)" since these lead off of public right of way and may indeed be located off public right of way. Detail drawing of steps will dimension the treads and risers, as well as the handrail height and location and the diameter of the rail. An extension of the handrail beyond the bottom step (per 702-105-00) should not be omitted, and should not extend into the clear width of the sidewalk.	
16	All grade breaks in walkways shall be perpendicular to the usual path of pedestrian travel.	

Comment No.	Comment	Response
17	Sheet 6—notes appear for four Pedestrian Landing Areas advising to "SEE DETAIL SHEET 5" yet Sheet 5 is currently OMITTED	
18	To the west of the intersection with Cove Lane, Google Street view shows a curb drain location for which the curb appears to be a foot or so farther from the centerline. This may be shown at STA 57+30 RT. Would sidewalk be shifted to follow the curb so as to keep minimum five foot width?	
19	At the intersection with Chelsea Day Lane, a residential side road currently without sidewalks, provision of a sidewalk curb ramp would allow pedestrian traffic (esp. those with disabilities) logically expected from Chelsea Day Lane to access the walkway project.	
20	General Note: at the intersection with side roads, this note is placed: "CONSTRUCT SIDEWALK AND DETECT. WARNING SURFACE IN ACCORDANCE WITH SCDOT STD. DWG. 720-910-01," yet nothing indicates that a sidewalk curb ramp is to be constructed. Should SCDOT Std. Dwg. 720-910-03 have been cited too or instead?	
21	Recommend consideration of by District Traffic Engineer of high-visibility ladder style crosswalk across Tega Cay Drive at Catamaran Drive.	
22	Design speed/posted speed should be indicated on plans.	
23	Recommend clarification regarding parking restriction along Tega Cay Drive throughout project limits. Unless parking is prohibited on the north side, motorists who are familiar with pulling (partially) off the pavement to park may continue to do so and thus block the sidewalk (a recurring problem when sidewalk is added behind ogee curb and gutter. Consider replacing ogee curb and gutter with vertical face curb and gutter where sidewalk is immediately behind curb and gutter. Alternately, or elsewhere, where the sidewalk can be separated from the back of the curb and placed closer to the back of the right of way, that should be considered.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-623	**Rd./Rte. Name:**	Amy Drive	**File No.:**	8.039754
County:	Berkeley	**Project Description:**	Boulder Bluff Elementary Safe Routes to School		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	7/19/12	**Reviewed By:**	RLK		

Comment No.	Comment	Response
1	Complete traffic data using a 20 year projection with the design year measuring from the expected construction completion date (HDM Section 9.6.2.1).	
2	Revise asphalt classifications listed in typical section legend to match those shown on latest Hot Mix Asphalt Selection Chart (i.e. HMA Surface Course Type C).	
3	Recommend providing project stationing in the design speed block given on typical section sheet.	
4	Provide "typical" ditch width dimension on typical section sheet. All ditches should have a minimum depth of 1 foot for drainage.	
5	Provide slope permissions on Right of Way Data Sheet where applicable.	
6	Provide entrance construction permissions on Right of Way Data Sheet for tracts with driveways where applicable.	
7	Include all applicable information on Reference data sheet including control points and VERTICAL curve data for curbs (HDM Section 34.2.6.3).	
8	Review intersection sight distances at intersections within project limits (HDM Figure 10.4C).	
9	Ensure the newly installed curb and gutter will not hinder the ability of the design vehicle (i.e. school bus, etc.) to make turning movements without damaging the curb. Provide corner radii on plan sheets.	
10	If practical, remove 2:1 slope from within clear zone area at station 22+35 (sheet X6). A few feet of the slope lie in the clear zone and removing it would help reduce any possible future incidents.	
11	Include a note specifying the station where the present right-of-way changes on sheets 7/8 (see IB 2012-2).	
12	Include elevations on curb profiles.	
13	Label beginning and ending construction stations on cross sections as shown on title sheet.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-981	**Rd./Rte. Name:**	Roughfork Street	**File No.:**	21.0398661
County:	Florence	**Project Description:**	North Vista Elementary SRTS		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12-31-12	**Reviewed By:**	VHM		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	VHM	8	Correct sheet number for Pavement Marking Plans.		
2	VHM	X1	Show begin note for Roughfork Street – sheet X1		
3	VHM	3	Show profile and cross sections for E. Vista Street to reflect the typical section on sheet 3.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-26, S-42, S-283	**Rd./Rte. Name:**	Main St, Brown St, School Drive	**File No.:**	36.040444
County:	Newberry	**Project Description:**	Town of Prosperity Sidewalk Project		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	6/21/12	**Reviewed By:**	KS, TD, JT		

Comment No.	Comment	Response
1	Beginning Station for S-26 Main Street does not match between Title Sheet and Plan and Profile Sheet.	
2	Ending Station for S-42 Brown Street does not match between Title Sheet and Plan and Profile Sheet.	
3	Beginning Station for S-283 does not match between Title Sheet and Plan and Profile Sheet.	
4	Typical Section should detail each sidewalk as 5 feet wide.	
5	Typical Section has a note that calls out Standard Drawing No. 710-105-01, but there is no such drawing.	
6	Sheet 4E is titled as Property Strip Map for Brown Street, however each note on this sheet calls S-42 (Main Street).	
7	Missing Utility Owners Note on First Plan Sheet.	
8	Main Street needs to have Guardrail placed around STA 28+50 based on HDM Figure 14.4A. See HDM Figure 14.6K for guidance on Guardrail placement behind Curbs.	
9	On Sheet 3 (Typical Sections) the section shown for use on S-36-42 from STA 10+41.61 to STA 22+63.96, and the section shown for use on S-36-283 from STA 17+50 to STA 18+59.63 show "SOD" between the right half (or left half) of the roadway and the sidewalk with a variable width indicated. Not knowing the width of that half of the pavement it is difficult to determine if the salient point that the width of the SOD must be greater than zero. We have consistently indicated that to meet accessibility requirements it should be greater than one foot (at the least).	
10	At the beginning of the project, a detail is sorely needed to depict the tie to existing sidewalk, the ramps (one across Dominick Street and one across Main Street) being provided and the other existing features at this corner.	
11	We are placing pedestrian facilities at an intersection (with Main and Pine opposite Dominick) that allows high-speed turning movements between Pine and Main. A significant improvement factor in pedestrian safety would be achieved if we were able to close off the	

Comment No.	Comment	Response
	terminus of Pine Street that doesn't align with Dominick such that motorists would have to stop/slow before making this maneuver.	
12	It is recommended (not required) that a segment of pavement (with detectable warnings) be provided (between the walkway and the edge of the road) to allow residents of Washington Street all-weather access to and from the walkway.	
13	The termination of the project at the southern end, Google Streetview calls this Miller Street.	
14	All sidewalk placed across driveways should be per one of the standard drawings, or stated to be at a cross slope of 2% Maximum.	
15	Recommend paving a 5-foot wide connector across sod width between STA 20 and 21 RT to provide access to and from the walkway at Colony Drive.	
16	Sheet 9. Sidewalk ends at Brown Street with a ramp and a cross walk to the other side. Verify presence of sidewalk on the opposite side of Brown Street. If it indeed exists there should be an paved blended transition or ramp to the sidewalk (at the southern end of the crosswalk being provided).	
17	At intersection of S-36-732, and School Drive, clarity seems to be missing from the plans as to what is the road limits.	
18	S.Main at end of project, station 31+41.50 — install curb ramp at intersection.	
19	Brown St —Station 10+14.61 — Provide curb ramps at both ends of the new crosswalk (crossing Armfield Street), making the entire intersection compliant.	
20	There may be conflicts between the catch basins and curb ramps at the intersection of Armfield Street and Brown.	
21	Arial imagery shows Brookside Road intersecting Brown Street in two locations; the Plans do not show Brookside Road. Please label all intersecting streets in the Plans. Sidewalks that intersect streets require curb ramps with detectable warnings.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	N/A	**Rd./Rte. Name:**	Willow Drive	**File No.:**	43.039764
County:	Sumter	**Project Description:**	Willow Drive Elementary School SRTS		
Type of Submittal:	R/W	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10/30/12	**Reviewed By:**	KS, TD		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	KS	Plan Sheets	Missing Present Right of Way Verification on Plan Sheets. Refer to Instructional Bulletin 2012-2.		
2	KS	Plan Sheets	Right of Way Data Sheet shows the purchase of new right of way and Plan Sheets show where the R/W Breaks occur, however Plan Sheets are missing the Right of Way widths.		
3	TD	PM1	Sheet PM1 shows a non-intersectional crosswalk being established/retained approximately 200-250 feet south of the edge of Broad Street. It is unclear if the necessary, appropriate, curb ramps (with detectable warnings) are being provided (or if existing, are being upgraded) as this does not appear on Sheet 6 of the plans.		
			Previous Comments Not Addressed on Plans		
4	TD	3	Label cross slope on sidewalk as 50:1 MAX (Previous Comment #14)		
5	TD	6	If the sidewalk will 'jut' around the utility pole, shouldn't the utility pole be shown? And won't it still be in the middle of this shared driveway? (Previous comment #17)		
6	TD	7	The question wasn't why 'jog' the sidewalk to the back of the right-of-way here, it was why not leave the sidewalk closer to the right-of-way line throughout (Previous comment #18)		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-1675/S-2383	**Rd./Rte. Name:**	College Street/Eastview Drive	**File No.:**	3240.040622
County:	Lexington/Richland	**Project Description:**	Irmo Sidewalk Project		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5-23-12	**Reviewed By:**	VHM		

Comment No.	Comment	Response
1	Recheck mileage on title sheet.	
2	Recheck north arrow on title sheet.	
3	Custom ramp designs require details that show all ADA requirements; i.e., pedestrian Ramp at station 29+92 L. Please indicate the ramp's slope and bottom landing dimensions; grade breaks should be perpendicular to the path of travel. For general guidelines and an appropriate scale for the aforementioned custom detail, refer to any SCDOT standard ramp drawing. All ramps shall conform to The SCDOT ADA Transition Plan. http://www.scdot.org/doing/pdfs/ada_transition_plan.pdf	
4	When referencing a Standard Drawing that includes multiple details, please provide the specific detail reference; i.e., pedestrian ramps at station 21+29 L, 29+92 R.	
5	Driveway Aprons — Standard drawing 720-405-00 depicts a 3' pedestrian minimum clear width at driveway aprons. We are in the process of updating our standards to reflect the 2005 PROWAG requirements which specifies a 4' as the minimum clear width. If it is reasonable to achieve a 4' clear width within the constraints of the project, please do so.	
6	Station 25+50 L —Note says to construct a 50' wide driveway apron, which is non-conforming. Please consult with the ARMS manual for appropriate driveway widths. http://www.scdot.org/doing/pdfs/ARMS_2008.pdf	
7	On cover sheet the base map is a county map when a city map would have been more useful.	
8	At STA 26+00LT driveway being constructed must have a 4-foot wide (minimum), 2%(maximum) pedestrian accessible element allowing for the sidewalk across this driveway. This holds true for any and all other driveways intersected by the proposed walkway.	
9	At the end of the run of sidewalk on Eastview Drive, verify that placement of detectable warning surface is shown along the line where the sidewalk meets roadway pavement at grade (i.e., where it meets not behind a curb).	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-1675/S-2383	**Rd./Rte. Name:**	College Street/Eastview Drive	**File No.:**	3240.040622
County:	Lexington/Richland	**Project Description:**	Irmo Sidewalk Project		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5-23-12	**Reviewed By:**	VHM		

Comment No.	Comment	Response
1	Recheck mileage on title sheet.	
2	Recheck north arrow on title sheet.	
3	Custom ramp designs require details that show all ADA requirements; i.e., pedestrian Ramp at station 29+92 L. Please indicate the ramp's slope and bottom landing dimensions; grade breaks should be perpendicular to the path of travel. For general guidelines and an appropriate scale for the aforementioned custom detail, refer to any SCDOT standard ramp drawing. All ramps shall conform to The SCDOT ADA Transition Plan. http://www.scdot.org/doing/pdfs/ada_transition_plan.pdf	
4	When referencing a Standard Drawing that includes multiple details, please provide the specific detail reference; i.e., pedestrian ramps at station 21+29 L, 29+92 R.	
5	Driveway Aprons — Standard drawing 720-405-00 depicts a 3' pedestrian minimum clear width at driveway aprons. We are in the process of updating our standards to reflect the 2005 PROWAG requirements which specifies a 4' as the minimum clear width. If it is reasonable to achieve a 4' clear width within the constraints of the project, please do so.	
6	Station 25+50 L —Note says to construct a 50' wide driveway apron, which is non-conforming. Please consult with the ARMS manual for appropriate driveway widths. http://www.scdot.org/doing/pdfs/ARMS_2008.pdf	
7	On cover sheet the base map is a county map when a city map would have been more useful.	
8	At STA 26+00LT driveway being constructed must have a 4-foot wide (minimum), 2%(maximum) pedestrian accessible element allowing for the sidewalk across this driveway. This holds true for any and all other driveways intersected by the proposed walkway.	
9	At the end of the run of sidewalk on Eastview Drive, verify that placement of detectable warning surface is shown along the line where the sidewalk meets roadway pavement at grade (i.e., where it meets not behind a curb).	

Comment No.	Comment	Response
10	On Sheet 7, on note "BEGIN SIDEWALK & CURB AND GUTTER STA 1+06.89" add the words "AS A TIE-IN TO EXISTING." Consider repeating the reference to the DETAIL ON SHEET 6.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-355	**Rd./Rte. Name:**	South Walker St.	**File No.:**	40.038094
County:	Richland	**Project Description:**	Rosewood Elementary School SRTS		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10/26/2012	**Reviewed By:**	SSS, TD, JT		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	SSS	1	Check the total number of sheets. There are only 22, revise accordingly.		1
2	SSS	1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.		1
3	SSS	5-9	Add station offsets to plan sheets		1
4	SSS	ALL	The end project station should match throughout plans. See title sheet, typical section, plan and profile sheets, and cross sections. Revise accordingly.		1
5	SSS	6-9	Design and Implementation of drainage structures should be done in accordance with IB 2009-4. (To include alternate pipe)		1

omment Status: **1** = Comment Submitted; **2** = UnresolveResolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US -176	**Rd./Rte. Name:**	Old State Road	**File No.:**	38.039329
County:	Orangeburg	**Project Description:**	From Gardner Boulevard To Town Hall Drive		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5/2/2012	**Reviewed By:**	CWB, TD, TE, JPT		

Comment No.	Comment	Response
1	Plans appear to be preliminary and incomplete.	
2	Utilize the latest Title Sheet. See IB 11-05.	
3	Add location map label (County or Town/City of) under the right hand corner of the location map on title sheet.	
4	Verify that Town Hall Drive is the correct name of the road for the projects ending termini. See sheet 8.	
5	Initials and Dates need to be added for Right of Way. See the SCDOT Review box shown on Title sheet.	
6	SCDOT currently utilizes the 2001 AASHTO policies. The policies for the 2004 AASHTO book have not been adopted by the SCDOT.	
7	Even though landscaping plans are listed in the index, I could not find them in the plan set. Where are the landscaping plans?	
8	Buffer areas on typical should be earth or paved? Could a width greater than 5 feet be misconstrued as a multi-use path?	
9	Please remove the Bahia grass seed from the seeding schedule in Table 1. I am not sure why you need Table 2. The seeding schedule can be found in Section 810.2.3.1, 2007 edition of the SCDOT Standard Specifications for Highway Construction, which can be found at the following link: http://www.scdot.org/doing/const_man.shtml□	

10	Typical sections should label sidewalk cross slope as 50:1 MAX.	
11	There should be an enlarged plan showing a standard "bench, tree pit, and trash can" arrangement. Is the bench sitting directly on the earth? Please provide dimensions indicating the clearance between street furniture, the curb and the sidewalk. Adequate space adjacent to benches to allow wheelchairs is to be provided. See PROWAG (http://www.access-board.gov/prowac/draft.htm) Section R307.6.3 Benches.	
12	Per SCDOT ADA Transition Plan (Jan.,2009; http://www.scdot.org/doing/pdfs/ada_transition_plan.pdf), throughout the project limits of a Transportation Enhancement project, all driveways will be brought into compliance with PROWAG. It is unclear if all or only certain driveways are to be replaced.	
13	No detail has been provided regarding the brick pavers represented by the brick pattern. Will this overlay the 3' x 7' box culvert? Concern also exists relative to the proximity of the Tree Pit to this existing box culvert being retained.	
14	Will details be provided for the Decorated Stone Wall in the right-of-way being provided near STA 904+00 RT?	
15	At Gum Street, recommend extending the sidewalk some short distance down the side street so as to establish the location for future walkways on that street. Do the existing sidewalk curb ramps at Gum Street intersection meet current standards (except for the detectable warnings which are being added) and provide access to the opposite side of Old State Road as well as of Gum Street? Detail drawings would be helpful at these and other corners.	
16	Between STA 913+00 and 914+00 RT there is a single, apparently unused, driveway which appears to access the lawn (not the driveway) of a church. Consider obtaining permission and omitting it.	

17	A list of possible street trees / sidewalk trees can be found at the following link: http://www.scdot.org/community/pdfs/street_tree_selection_guide.pdf	
18	Add the VPI curb grade data to the general construction note.	
19	In general, the accessibility of the sidewalk throughout this project would be optimized by holding the elevation of back edge of the (existing) sidewalk, as opposed to numerous full-ramp-down driveways. Then SCDOT Standard Dwg. 720-410-00 could be specified for a minimal lowering of the sidewalk at each driveway.	
20	In general, good pedestrian design places a value on the separation afforded by the planted strip between the back of the curb and the edge of the walkway. On this project it is being eliminated—at some locations to provide an enhanced area (bench, tree pit, and trash, etc.) but at others only to provide an apparently excess width of sidewalk. Could there be consideration given to a 5-foot sidewalk with the buffer between the curb and the walkway being grass? See p. 59 and 67-68 of the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities for more discussion of the planting strip value.	
21	Property between STA 909+00 and 910+00 RT should have driveways constrained to the limits provided by ARMS, and between driveways a barrier provided to protect sidewalk users from vehicles parked and stored in front of this tire repair facility.	
22	STA 902+50RT—will there be a utility pole in the center of a driveway?	

23	Concern exists with the placement of 5-foot concrete sidewalk at locations such as STA 902+00RT. When the walkway abuts an existing concrete parking area, means are recommended to prevent motorists from encroaching onto the walkway except at the driveways established. Otherwise vehicles will be parked on the sidewalk pavement and it will deteriorate rapidly.	
24	The placement of the enhanced sidewalk and 'bench/tree/trash can' areas define driveways. Verify that compliance has been maintained with the ARMS Manual.	
25	There is a note near STA 901+50 RT "CONTRACTOR IS TO MATCH DIRVEWAY CROSS SLOPE FOR ALL DRIVES." Does this mean that all driveways have been evaluated to determine if the 4-foot wide, 2% MAX cross slope pedestrian accessible element has been achieved?	
26	It does not appear that at the beginning point of the project, there is a ramp for crossing Old State Road.	
27	Add NPDES lines to plans. See sheets 6, 7 and 8.	
28	Add Utility Owners note to the first plan sheet. See Chapter 5 of the Plan Preparation Guide (PPG) for guidance.	
29	Add Alignment Control Note to plan sheets. See sheets 6, 7 and 8. See Instructional Bulletin (IB 97-11) for guidance.	
30	Present Right of Way needs to be verified by File Number and Date.	
31	Please verify that adequate intersection sight distance is provided based on site conditions (posted speed, grade, etc.).	
32	Add curb grade profile when the length of any section of curb and gutter is 300 feet long or greater. Curb grades should agree with top of curb elevations on cross sections. See IB 99-11 for guidance.	
33	Ensure that the District Traffic Engineer reviews the traffic control plan.	

34	Include present right of way along with new right of way on cross sections. See IB 12-7 for guidance.	
35	Cross sections are not in agreement with typical section number 2. The dimension from the back of curb to the back edge of sidewalk should scale 8 feet. The dimension from the back of curb to the back edge of sidewalk scales 7.0'. Sidewalk needs to be extended by 1 foot to match typical section. See sheet 3 and 14.	
36	The dimension shown on typical number 1 from Present Right of Way to the New Right of Way is not in agreement with the typical itself or the cross sections. See sheet 3 and X2.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	Carver Lyon Elementary	**Rd./Rte. Name:**	Carver Lyon Elementary	**File No.:**	NA
County:	Richland	**Project Description:**	SRTS		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10/11/2012	**Reviewed By:**	SSS, TD, JPT		

Comment No.	Comment	Response
1	Plans need to be submitted with all pertinent information available to make the review process as accurate as possible. An example of this would be proper RW verification to include file number, docket, project number and initial. Label present right of way per IB 2012-2	R/W information has been added to the plan sheets.
2	Label map on title sheet and add Hydraulic design reference label	The map has been labeled and the reference label has been added.
3	1. Place bicycle rack at least 2'-0" from the curb to provide adequate separation from motor vehicles. Other helpful guidelines for good placement of bicycle racks are: a) Provide 72" clearance to prevent a mounted bicycle from interfering with adjacent pathways. b) Provide a 24" minimum clear space at open end(s) of the rack to prevent a mounted bicycle from interfering with adjacent pathways. c) Rack shall be located no less than 36" from a wall, newspaper rack, US Mailbox, light pole, sign pole, bus shelter, driveway, street furniture, standpipes, other sidewalk elements. d) The rack shall be located no less than 48" from a bus stop, loading zone, crosswalk or curb ramp. e) The rack shall be located no less than 60" from any fire hydrant.	The bicycle rack locations has been moved as per the guidelines attached.
4	Draw concrete sidewalk with integral curb per std. 720-105-01 on the typical section	The typical section has been revised so that the sidewalk is as per std 720-105-01.
5	Add alignment control note to all plan sheets	The alignment control note has been added to all plan sheets
6	The begin construction note needs to match throughout the plans.	The begin construction note matches throughout the plans.
7	On the title sheet, the Project # should be **SRSP(043)** instead of 40.03990 as shown	The project number has been corrected.
8	On the title sheet, the File # should be 40.039900 instead of 21.039866 as shown.	The file number has been corrected.

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	N/A	**Rd./Rte. Name:**	Tomassee Avenue	**File No.:**	23.039761
County:	Greenville	**Project Description:**	Safe Routes to School/ Augusta Circle Elementary School		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1/2/13	**Reviewed By:**	RLK, TD, JT		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RLK	1	Refer to Instruction Bulletin (IB) 2011-5 regarding title sheet for consultant prepared projects. Title sheet should include Environmental Permit Information Box, updated CALL 811 Box, etc. Also show PCN suffix on title sheet.		
2	RLK	1	Refer to Highway Design Manual (HDM) Figure 34.1B regarding sheet order and sheet names. Recommend placing Pavement Marking Plans prior to the Erosion Control Data Sheet. Also recommend providing separate sheets for the Reference Sheet and General Construction Note Sheet.		
3	RLK	1	Provide traffic data and design speeds if available.		
4	RLK	1	Provide Hydraulic Design Reference Label on title sheet (IB 2009-3).		
5	RLK	2/5	Summary of Estimated Quantities shows a total quantity of 228 CY for Borrow Excavation. General Construction Note Sheet shows 238 CY. Verify proper quantity and revise where needed.		
6	RLK	2	Ensure quantity shown in Summary of Estimated Quantities for Concrete Sidewalk is accurate based on project stations. Revise if needed.		
7	RLK	2	Any quantity not detailed in plans should be shown as an inclusion on General Construction Note Sheet (i.e. for example, geotextile fabric). Update inclusion list where needed. Also, pay item descriptions shown on the General Construction Note should match exactly those found in the Summary of Estimated Quantities.		
8	RLK	2	Determine if a pay item for Stabilized Construction Entrance is warranted and add if needed.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
9	RLK	Multiple	Refer to IB 2009-4 regarding the implementation of alternate pipe shown on (drainage) plan sheets.		
10	RLK	2	See IB 2011-1 regarding the recommended quantity for Agricultural Granular Lime.		
11	RLK	2	Add pay item for Selective Watering (IB 2011-1).		
12	RLK	2	According to IB 2011-1, a quantity for Mowing is needed.		
13	RLK	2/5	Correct misspelling of "Tackifier" (pay item 8101110) on Summary of Estimated Quantities and General Construction Note Sheet. The same needs to be done for "Agricultural" (pay item 8105005).		
14	RLK	Multiple	According to typical sections, it appears as though only the top portion of the existing pavement is to be removed. However, cross sections indicate full depth removal (below the curb and gutter). For example see station 12+20 in cross sections. Verify and revise plans to match if needed.		
15	RLK	4/7	It appears tracts 6 and 7 may warrant NPDES permission. Verify if there is a need for the permissions at these locations and revise Right-of-Way Data Sheet if required.		
16	RLK	6	Refer to IB 2012-2 regarding present right-of-way notes shown on plans. All notes should include right-of-way offset and initials of the designer who verified the information.		
17	RLK	6	Verify present right-of-way in plans. It appears that the same right-of-way line is labeled as "Present 50' RW" and also "Existing 22' R.O.W. See near station 13+75 RT. Ensure all locations are labeled accurately.		
18	RLK	5	Refer to IB 2003-6 regarding the General Construction Note that should be placed on sheet 5 (replace "State Highway Engineer" with "Deputy Secretary for Engineering").		
19	RLK	5	Revise Unit for Full Depth Asphalt Patching 6' shown on General Construction Note Sheet from "TON" to "SY."		
20	RLK	5	Provide all available information on Reference Data Sheet (see HDM Section 34.2.6.3).		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
21	RLK	6-8	Ensure appropriate design vehicle has been used and that the newly placed curb and gutter will not hinder the ability to maneuver around Tomassee Avenue at all intersections. Plans show corner radii as small as 10'.		
22	RLK	6-8	Provide stationing on plan sheets where typical sections indicate sidewalk is transitioning from being located behind curb and gutter to having the grass strip. Notes are currently given explaining the transitions but the stationing is not labeled. See stations 20+65, 21+20, etc.		
23	RLK	6	Evaluate the need to provide vehicular barrier along the retaining wall. The wall may lie within the clear zone presenting a danger to motorists. Unable to determine clear zone as no design speeds or ADT's were given.		
24	RLK	7A	Generally, type 18 catch basins are used at low points along the profile. Plans detail a type 16 catch basin being constructed at station 15+70 RT. Verify drainage is properly designed and revise if needed.		
25	RLK	6-8	Provide alignment control note on all plan sheets (IB 1997-11).		
26	RLK	6-8	Recommend labeling beginning/ending station notes on curb profiles to match typical section and plan sheets.		
27	RLK	Multiple	The curb profile elevations given on profile sheets are currently corresponding to the centerline elevations shown in cross sections. Meanwhile, the PGL elevations given on profile sheets match up with the top of curb elevations in the cross sections. Unsure if this is a labeling error.		
28	RLK	EC1	Refer to IB 2011-4 regarding the latest Erosion Control Data Sheet.		
29	RLK	X1-X12	Show right-of-way labels on cross section (IB 2012-1).		
30	RLK	X1-X12	Show earthwork areas and volumes in cross sections.		
31	RLK	X1-X12	Label beginning/ending construction stations on cross sections to match those given on title sheet.		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
32	TD	6	(Based on previous comment and response #4): When measures such as root barriers are being provided to protect major trees at a cost to the project, recommend an arborist evaluate the trees in terms of their overall health and life expectancy. Before money is spent on measures to assure the future existence of these trees, it would be well served to have an assessment of their current health and their ability to withstand and benefit from the placement of the root barrier. Newer Google images show greater potential issues involving placement of the new walkway and ramps in the immediate vicinity of the tree closer to the stop sign for Meyers Drive.		
33	TD	6/7	Standard Drawing 720-410-00 is for sidewalk through driveways not for sidewalks proper.		
34	TD	6	(Based on previous comment and response #5): We still recommended the central portion of the ramp use closer to the typical 5-foot minimum distance along the curb. The response countered they wished to retain 8-9 feet width along curb.		
35	TD	7	(Based on previous comment and response #6): Eastern corner is indicated to receive a curb ramp per STD DWG 720-910-03, but a different design is illustrated (and preferred)—remove call out of this STD DWG, as what is being provided appears to be more of a blended transition than a ramp.		
36	TD	3A	Regarding the southeast corner detail for the intersection of Tomassee and Argonne, around the corner of Argonne, do not construct any sidewalk less than 5 foot wide. Widths shown as 3.85' must clearly be indicated as the existing sidewalk being retained.		
37	TD	7	Regarding the northeast corner detail for the intersection of Tomassee and Argonne, plans may not show current conditions. Sidewalk is shown being narrowed as it passes down Argonne (at a 40-inch Oak that does not appear in current Google Street View images). Verify that tree is gone, and widen walkway back to 5-feet through end of project.		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
38	TD	8	Along Tract (3) it appears a split rail fence has been installed up to the edge of pavement. Show as a remove/reset item as appropriate.		
39	JT	3	Segmental retaining wall with fence calls out pay item number 705-502-0, which is a bridge railing. Please revise the pay item to standard drawing 806-505-00.		

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-31	**Rd./Rte. Name:**	Hampton Street	**File No.:**	32.04632
County:	Lexington	**Project Description:**	Town of Gilbert, S-31 (Hampton Street) Sidewalks		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	08/29/12	**Reviewed By:**	AH		

Comment No.	Comment	Response
1	The Hydraulic Design Reference Label should be shown on the title sheet.	
2	The map shown on the title sheet is the Gilbert City Map but is labeled Lexington County. Use the town map and adjust the label accordingly.	
3	Update the current note on the General Construction Note to read with "The Deputy Secretary for Engineering."	
4	Erosion Control Items are listed as "Lump Sum Items" on the General Construction Note, but are broken down as Erosion Control and Seeding Items on the Summary of Estimated Quantities. Erosion Control and Seeding Items should be shown on the General Construction Note as they are not shown anywhere else in the plans.	
5	Reference Instructional Bulletin 2005-1 for guidance on Pay Items that should not be shown in the plans.	
6	The use of pay item "9581500 Erosion Control" should be justified. If appropriate justification cannot be submitted, standard Erosion Control Pay items should be used in the plans.	
7	All pay items not detailed within the plans should be shown on the General Construction Note with a description of their use.	
8	Right of Way should be verified and shown according to SCDOT Instructional Bulletin 2012-2.	
9	The note for Alignment Control on sheet 6 references sheet 5A, but sheet 5A has no Alignment Control.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 642	**Rd./Rte. Name:**	Dorchester Rd.	**File No.:**	10.037778A
County:	Charleston	**Project Description:**	Hunley Park Elementary School - SRTS		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted] **Consultant:**	[redacted]
Review Completion Date:	12/12/12	**Reviewed By:**	RLK		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RLK	1	PCN number shown on title sheet should include a 4 digit suffix, i.e. RD01, PE01, etc. PES shows a suffix of SP01. Also recommend showing SCDOT approval boxes on construction title sheet.		
2	RLK	-	Provide file number and mileage in PES.		
3	RLK	6, 9	The begin sidewalk note shown on profile sheet 6 (540+65.57) does not match the construction station (540+76.28). Provide begin/end construction stations on profile sheets 6 and 9. Also provide begin/end construction stations in cross sections.		
4	RLK	1	Title sheet should indicate there are no equalities in stationing.		
5	RLK	3	Based on the latest Hot Mix Asphalt Selection Guidelines, Surface Course Type B would normally require Base Course Type A. Typical sections utilize Base Course Type B. Typical sections should be approved by SCDOT Pavement Design Engineer.		
6	RLK	3	Provide a 1' buffer at the back of the sidewalk (at 2%) before sloping toward existing ground (HDM Figure 21.2C).		
7	RLK	2	Unable to verify pavement quantities based on typical sections and plans as submitted. Verify quantities and ensure accuracy.		
8	RLK	2	Summary of Estimated Quantities shows a quantity for Permanent Construction Signs (Ground Mounted) of 300 SF. PES shows a quantity of 4.5 SF. Verify and revise where needed.		
9	RLK	2	Provide bid/pay item numbers for each item given in the Summary of Estimated Quantities.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
10	RLK	2	Summary of Estimated quantities includes a pay item for Metal Conex Building which is not shown in PES. Conversely, PES includes a pay item for Storage Building and all Related Appurtenances not shown on the Summary of Estimated Quantities. Revise descriptions to match if that is the intended purpose of these two pay items.		
11	RLK	EC3	Erosion control plans should detail the quantity of rip-rap and geotextile fabric. Unable to verify quantity for rip-rap shown in Summary of Estimated Quantities based on plans as submitted.		
12	RLK	2	Include a quantity for Selective Watering in Summary of Estimated Quantities (IB 2011-1).		
13	RLK	3	Show sidewalk cross slope on typical sections as "2% MAX".		
14	RLK	5	Revise General Construction Note from "State Highway Engineer" to "Deputy Secretary for Engineering."		
15	RLK	Various	Silt fence is generally only placed within fill sections. Plans show areas where cut sections are having silt fence placed and fill sections that are not using silt fence. Also silt fence is generally placed near the right-of way line to keep sediment off adjacent properties (HDM Section 30.3.3.3). Verify placement of NPDES lines shown on plans and revise if needed.		

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:		**Rd./Rte. Name:**	Godber Street, Anchor Road & Foxcroft Road	**File No.:**	10.039747
County:	Charleston	**Project Description:**	Safe Route to School		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12-10-12	**Reviewed By:**	VHM		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	VHM	Sheet 2 & Sheet 5B	Question why the Metal Conex Building should be added to the Summary of Estimated Quantities - sheet 2? Also question what is SCDOT involvement with the Metal Conex Building being installed – sheet 5B?		
2	VHM	Sheet 2	Add pipe quantities to Summary of Estimated Quantities - sheet 2		
3	VHM	Sheet 2	Question why Permanent Cover is not added to the Summary of Estimated Quantities – sheet 2?		
4	VHM		For clarity show beginning and ending notes on cross sections.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-437&S-411	**Rd./Rte. Name:**	Garden St. and Huntley Dr.	**File No.:**	10.039751
County:	Charleston	**Project Description:**	SRTS		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12/11/2012	**Reviewed By:**	SSS		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	SSS	2	Is Liquid asphalt binder needed for the Hot Mix Asphalt application? If so add the pay item to quantity sheet.		
2	SSS	2	There are pay items on the quantity sheet without a pay item number. Revise accordingly.		
3	SSS	3	Add dimensions to the travelway on the typical sections where work is being done.		
4	SSS	Plan sheets	Add the alignment control note to all plan sheets (See IB 97-11 for guidance)		
5	SSS	EC1	Use latest ECDS per IB 2011-4		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-187	**Rd./Rte. Name:**	Wassamassaw Road	**File No.:**	18.037782A
County:	Dorchester	**Project Description:**	Alston Middle School Safe Routes to School		
Type of Submittal:	95% Plans	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12/13/12	**Reviewed By:**	KS, TD		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	KS	2	Quantity for 18" Smooth Wall Pipe and 18" Corrugated Wall Pipe in Bid Alternates 1 & 2 seems low. Review and Revise accordingly.		
2	KS	2 & 5	Quantity for Mowing in Bid Alternate A does not match Inclusion Items.		
3	KS	5	General Construction Note should be updated to "Deputy Secretary for Engineering" instead of "State Highway Engineer"		
4	KS	6, 7, & 8	Plan Sheet calls out "Ramp Per SCDOT STD. DWG. 720-910-03", however this Standard Drawing does not exist.		
5	KS	4A	Provide more information about the 40' R/W labeled on the strip map between tracts 8 and 7. Is this owned by SCDOT or someone else? Has permission been given for a driveway to be placed here and Tract no. 7 to use the driveway?		
6	TD	6, 7, & 8	The note "DROP CURB DRIVEWAY" might be deleted and replaced with the more specific "CONSTRUCT DRIVEWAY PER STD. DWG. 720-405-00." Per this Standard Drawing sidewalk profile is allowed a 0.25-foot maximum drop in each driveway.		
7	TD	6	Plan Sheet calls out "RAMP PER SCDOT STD. DWG. 720-910-1 (5)", however this cited standard drawing is for sidewalk curb ramps at intersections, not driveways. Placing a normal drop curb driveway here would be more appropriate.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:		**Rd./Rte. Name:**		**File No.:**	20.037974A
County:	Fairfield	**Project Description:**	Fairfield Middle School SRTS		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	11-16-12	**Reviewed By:**	VHM		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	VHM	1	Note: Recommend consideration from legal about the use of maps and imaginary from companies with copyright for their maps. This is a link to our maps: http://smpfalcon/scdot-falcon-prjs/maps/county/tif/large-maps/Fairfield_large.tif .		
2	VHM	1	Add Hydraulic Design Reference Label to title sheet (See Instructional Bulletin 2009-3) – sheet 1		
3	VHM	2	See Instructional Bulletin 2011-1 and Supplemental Technical Specification for Seeding SC-M-810-2 (04/11) for seeding on Summary of Estimated Quantity sheet.		
4	VHM	2	Show the pay item number 9607007 and the proper description for the bike rack (See pay item list for Bicycle Parking Rack http://www.scdot.org/doing/road_Pay.aspx).		
5	VHM	2	Show the pay item number and the proper description for Yellow-Epoxy Paint on Summary of Estimated Quantity sheet (See http://www.scdot.org/doing/road_Pay.aspx).		
6	VHM	3A	Show reference note on Bike Rack Detail sheet for location of Bicycle Parking Rack on plan sheet (Example: See plan sheet 6 for location of Bicycle Parking Rack).		
7	VHM	3A	Ensure that there is enough clearance between the park bicycle and the sidewalk. The bicycle length is measured from wheel to wheel (with a minimum of 72" which provides enough space for one person to walk one bike.).		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	USCA Pedestrian Bridge	**Rd./Rte. Name:**	USCA Pedestrian Bridge	**File No.:**	2.042163
County:	Aiken	**Project Description:**	USCA Pedestrian Bridge		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	12/4/12	**Reviewed By:**	RLK, BN, TD, JT		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RLK	Multiple	The plans were not prepared using SCDOT plan development practices. The following comments are an attempt to bring the plans closer into compliance.		
2	RLK	Multiple	Plans should be developed using Highway Design Manual Chapter 34 as a guide.		
3	RLK	Title	Refer to Instructional Bulletin (IB) 2011-5 and Highway Design Manual (HDM) Chapter 34 regarding consultant prepared title sheets.		
4	RLK	-	Construction plans should contain a Summary of Estimated Quantities sheet.		
5	RLK	Multiple	Provide design speeds in plans where applicable.		
6	RLK	C2.0	For future reference, designers should be aware that the (future) guardrail and a portion of the 10' future bike path will be within the shoulder of SC 118 and could potentially present a conflict. Guardrail is typically placed outside the shoulder.		
7	RLK	S1.0	For future reference, provide pavement design for the portion of SC 118 that will be widened.		
8	RLK	-	Provide Right-of-Way Data Sheet in plans (HDM Section 34.2.5.1).		
9	RLK	-	Provide General Construction Note Sheet (IB 2003-6). Replace "State Highway Engineer" with "Deputy Secretary for Engineering."		
10	RLK	-	Provide Reference Data Sheet with necessary information (HDM Section 34.2.6.3).		
11	RLK	Multiple	Refer to IB 2012-2 regarding present right-of-way shown in plans.		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
12	RLK	-	Provide Erosion Control Data Sheet if disturbed area is greater than 1 acre (IB 2011-4).		
13	BN	C2 & S1	SCDOT Road Data Services recognizes the functional classification of route SC 118 (Robert M Bell Parkway) as an Urban Arterial. In accordance with current SCDOT design guidelines, pedestrian bridges should be designed with a minimum vertical clearance of 18'. Refer to SCDOT Highway Design Manual Figure 21.3A for guidance.		
14	TD	-	Within the parking lot on the north end of this project consider relocating one of the planted peninsulas to the west of where the proposed crosswalk meets the beginning of the path to have it immediately opposite the island where the crosswalk is shown beginning. Otherwise it will be difficult during sell-out events at the convocation center to keep people from parking in the crosswalk. This will also result in a much shorter crosswalk (distance where pedestrians are exposed to motor vehicle parking-lot traffic). See attached sketch.		
15	JT	C2.0	The south ramp leading from bridge is missing handrails and landings, and the profile view is illegible due to its scale. All ramps must fully comply with code: slope, landings, handrails, edge protection, etc.		
16	JT	C6.1	Ramps (excluding curb ramps) shall have edge protection in accordance with code. The ramp details on sheet C6.1 are missing edge protection.		
17	JT	C3.1	Provide dimension strings for ramps and ramp landings.		
18	JT	S1.3	The handrail detail on sheet S1.3 appears to be non-compliant. Handrails require a 1½" minimum clearance between the gripping surface and adjacent surfaces, and the 4x4 plate interferes with this requirement.		
19	JT	-	Indicate the handrail diameter.		
20	JT	-	Pedestrian guard — dimension the height.		
21	JT	-	Pedestrian guard — ensure mesh opening size complies with AASHTO's clear opening requirements.		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
22	JT	C6.1	Please provide a perpendicular curb ramp detail where the sidewalk intersects the parking lot.		
23	JT	-	Please provide a detail showing the connection where the ramp handrail intersects stair handrail.		

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-98	**Rd./Rte. Name:**	Tega Cay Drive	**File No.:**	46.040653
County:	York	**Project Description:**	Tega Cay Drive Sidewalk Enhancement		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/29/12	**Reviewed By:**	RLK		

Comment No.	Comment	Response
1	Provide all needed seals, signatures, initials and dates on final construction plans.	
2	Refer to Instructional Bulletin 2005-1 regarding pay items that should not be shown in Summary of Estimated Quantities.	
3	Instruction al Bulletin 2011-1requires mulch for all temporary and permanent cover applications. Add pay item to Summary of Estimated Quantities if necessary.	
4	Instructional Bulletin 2011-1 recommends an Agricultural Granular Lime quantity of 2000 lbs./acre of permanent cover. Verify quantity for Agricultural Granular Lime shown in Summary of Estimated Quantities. Also, "Granular" is misspelled in the Summary of Estimated Quantities.	
5	Refer to Instruction Bulletin 2011-1 regarding the quantity for Selective Watering. No water is recommended for a Permanent Cover quantity less than 0.5 acre.	
6	IB 2011-1 requires a pay item for Mowing when permanent cover is utilized. Determine if Mowing is needed and include in Summary of Estimated Quantities if necessary.	
7	The use of pay item "9581500 Erosion Control" should be justified. If appropriate justification cannot be submitted, standard Erosion Control Pay items should be used in the plans.	
8	All pay items not detailed within the plans should be shown on the General Construction Note as inclusion items along with a description of their use.	
9	Include pay items for Right of Way Plat (8091050) and Right of Way Marker - Rebar and Cap (8091010) in Summary of Estimated Quantities (Preconstruction Advisory Memorandum 8) when new right of way is needed.	
10	Revise the General Construction Note from "The State Highway Engineer" to "The Deputy Secretary for Engineering."	

Comment No.	Comment	Response
11	Erosion Control Items are listed as "Lump Sum Items" on the General Construction Note, but are broken down as Erosion Control and Seeding Items on the Summary of Estimated Quantities. Erosion Control and Seeding Items should be shown on the General Construction Note if not detailed in the plans.	
12	Revise alignment control note to reference the correct sheets.	

Rd./Rte. No.:	SC 9 & S-178	**Rd./Rte. Name:**	Main Street & Meeting Street	**File No.:**	
County:	Horry	**Project Description:**	City of Loris Streetscape		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	9-5-12	**Reviewed By:**	VHM, TE, JKL		

Comment No.	Comment	Response
1	Ensure Standard Drawings are up-to-date in accordance with SCDOT Standard Drawings http://www.scdot.org/doing/sd_Book.aspx.	Standard Details have been updated: See Sheets 30-33. All notes referencing Details have been revised.
2	Please add the following note to the tree planting detail (sheet 30): Place the plant in the pit so that the root flare is even with the finished grade level. It may be necessary to remove soil from the top of the root ball in order to expose the root flare.	Note has been added: See Detail 'M' Sheet 33
3	Remove staking and guying of trees one year after planting. (*I realize that the town will provide and install all trees.)*	Note has been added: See Detail 'M' Sheet 33

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 9	**Rd./Rte. Name:**	Main Street	**File No.:**	35.039052
County:	Marlboro	**Project Description:**	Town of Clio Streetscape, Phase III		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	3/26/2012	**Reviewed By:**	AH, TD, JT		

Comment No.	Comment	Response
1	Reference SCDOT Highway Design Manual Figure 34.1B for proper sheet order.	
2	There is 610 CY of Unclassified Excavation on the General Construction Note; however none is shown on the Summary of Estimated Quantities.	
3	Reference Instructional Bulletin 2011-1 for an appropriate seeding plan. The General Construction Note shows Permanent Grassing for Small Projects while the Summary of Estimated Quantities shows Permanent Cover.	
4	Verify that correct pay items are shown on the Summary of Estimated Quantities. For example, the pay item number for Hot Mix Asphalt Surface Course (Type D) is shown incorrectly as 1030350.	
5	Some items should not be shown on the Summary of Estimated Quantities. Reference SCDOT Instructional Bulletins 2005-1 and 2009-6.	
6	Pavement Design should be approved by the SCDOT Pavement Design Engineer.	
7	Sheet 3—in the cross sectional view, label the 3-foot separation between 'existing width' and 'sidewalk' as "grass verge—not to be paved." This will serve to emphasize an area of concern to all.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 9 & S-178	**Rd./Rte. Name:**	Main Street & Meeting Street	**File No.:**	
County:	Horry	**Project Description:**	City of Loris Streetscape		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	9-5-12	**Reviewed By:**	VHM, TE, JKL		

Comment No.	Comment	Response
1	Ensure Standard Drawings are up-to-date in accordance with SCDOT Standard Drawings http://www.scdot.org/doing/sd_Book.aspx.	
2	Please add the following note to the tree planting detail (sheet 30): Place the plant in the pit so that the root flare is even with the finished grade level. It may be necessary to remove soil from the top of the root ball in order to expose the root flare.	
3	Remove staking and guying of trees one year after planting. (*I realize that the town will provide and install all trees.)*	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 703	**Rd./Rte. Name:**	Ben Sawyer Multi Use Path			**File No.:**	N/A
County:	Charleston	**Project Description:**	Multi Use Path				
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:**	[redacted]	**Consultant:**	[redacted]
Review Completion Date:	6/1/12	**Reviewed By:**	GRB, TD, CWB, TE				

Comment No.	Comment	Response
1	Add Project Control Number (PCN) with four digit suffix to title sheet.	
2	Add File number to title sheet.	
3	Add Project number to title sheet.	
4	Add Mileage to title sheet.	
5	Add Environmental permit information to title sheet. See IB 2011-05 for guidance.	
6	Add location map label under the bottom right hand corner of location map on title sheet.	
7	Add traffic data information to title sheet. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2. See IB 2011-05 for guidance.	
8	Show latitude and longitude for the Begin and End of project. See IB 2011-05 for guidance.	
9	The Beginning and Ending Station Notes shown on the typical section is not in agreement with the title sheet or the cross sections revise. See sheet 1, 3 and cross sections.	
10	Add begin and end station notes for existing bridge to title sheet, typical section, plans, profile, and cross sections. See PPG for guidance.	
11	Add Bridge note to title sheet. Note: "Bridge plans bound under separate cover". See PPG for guidance.	
12	Length of Project, Bridges, and Exceptions are not shown on title sheet. See PPG for guidance.	
13	Show mileage in thousandths for mainline, sideroads, and bridges. See PPG for guidance.	
14	Add signature and date for the Engineer of Record to title sheet.	
15	Add AASHTO's 2001 design reference label to title sheet.	
16	Right of Way Acquisition needs to be Signed and Dated.	
17	Add Hydraulic Design Reference Label to title sheet.	

18	The project should be designed in accordance with AASHTO's "Guide for the Development of Bicycle Facilities" 1999 Edition.	
19	Locate utilities prior to the start of work.	
20	The pay item for 1031000 Mobilization should not be shown on the Summary of Estimated Quantities sheet, but will be included in the total quantities for the project. See IB 2005-1 for guidance.	
21	Unable to verify the quantity for 2031000 Unclassified Excavation. No pavement thickness was shown on cross sections templates. See PPG for guidance.	
22	Ensure pay item number is correct for Selected Removal of Marked Trees (2106000). Was not able to find the number in the 2007 Standard Specifications for Highway Construction pay item list.	
23	Add Stabilized Construction Entrance to Summary of Estimated Quantities. See IB 2005-2 for guidance	
24	Revise the pay unit from LS to LF for the following pay items. 8153090 Replace/Repair Silt Fence 8154050 Removal of Silt Retained by Silt Fence See IB 2006-10 for guidance.	
25	Use Permanent Cover in place of Permanent Vegetation. See IB 2011-1 and Supplemental Technical Specification for Seeding SCDOT Designation: SC-M-810-2(04/11) for guidance.	
26	Use Temporary Cover in place of Temporary Vegetation. See IB 2011-1 Supplemental Technical Specification for Seeding SCDOT Designation: SC-M-810-2(04/11) for guidance.	
27	When Graded Aggregate Base Course (4" Uniform) is utilized include a quantity for Prime Coat. See Supplemental Specifications ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION for guidance.	
28	Although the SCDOT lower-state grass seed mix is a good choice for grassing ditch areas, I have been told that Seashore paspalum (Paspalum vaginatum, not notatum) has been successfully used in high salt exposure areas. Neither grass should be used between the highway and the multi-use path.	
29	I suggest that the area between the highway and the multi-use path be planted with Muhlenbergia capillaris (Pink Muhly Grass, 2'-3' tall at maturity) or another low plant instead of Muhlenbergia filipes (Sweetgrass). Sweetgrass is not a permanent-cover grass and not tall enough to be a visual barrier.	
30	Add pavement legend to typical section. See sheet 3. See PPG for guidance.	

31	Add Design Speed Block to typical section. See sheet 3. See PPG for guidance.	
32	The proposed shared use path encroaches onto the roadway shoulder. AASHTO recommends a suitable physical barrier if 5' of separation can not be achieved between the shared use path and the edge of the shoulder. Reference page 35 of AASHTO Bike Guide.	
33	10' is considered the minimum shared use path width except in rare instances as discussed on page 36 of the AASHTO Bike Guide. An 8' shared use path intended to serve two way bike/ped traffic can become operationally challenging for users if it is routinely utilized.	
34	Typical section drawing depicts tree on shoulder of shared use path. This area should be kept clear to provide a clear shoulder area for the path.	
35	Add Right of Way Data sheet and include all pertinent information to plans. See PPG for guidance.	
36	Add General Construction Note and include all pertinent information to plans. See PPG for guidance.	
37	Plans show rectangles containing the letters "SF." Table of ABBREVIATIONS on Sheet 5 define that as SQUARE FEET. Other rectangles are labeled "FIP" (not defined) or "TP" defined in this table as "TOP OF PAVEMENT." Please verify if the correct meanings are provided.	
38	Please add the landscaping special provisions to the permit application.	
39	The project scope specifies reducing travel lane widths below current SCDOT standards. SC Route 703 is classified as an urban principal arterial and requires 12' travel lane widths. A design exception will be required prior to implementation of this scope.	
40	The project corridor is currently posted 50 mph. The lack of separation for the path, reduced travel lane width, and high speed of the roadway should be thoroughly evaluated by Department Staff to ensure that this project scope can be safely integrated into the corridor.	
41	Shifting the crown may require an extensive amount of buildup to ensure adequate pavement cross slopes are reconstructed. Ensure pavement quantities accurately reflect the necessary build-up to address the crown shift.	
42	Add bearings to all centerline tangents. See plan sheets.	
43	Number all property tracts. See plan sheets.	

44	Label Right of Way at the beginning and end of each plan sheet. Include File/Docket/Project Number and Date for present right of way.	
45	Label Right of Way at the beginning and end of Tapers.	
46	Show travelway widths at the beginning and end of all tapers. See plan sheets.	
47	Add NPDES lines to plans.	
48	Add Alignment Control Note to plan sheets. See IB 97-11 for guidance.	
49	Since the pathway does not cross the bridge, a separate discussion needs to be conducted relative to the crossing movements by cyclists and pedestrians that this path will generate.	
50	Show the percent of grade between every P.I. on profile for SC 703. See sheet 6 and all other profile sheets in plans. See PPG for guidance.	
51	Profile elevations are not in agreement with cross sections. See sheets 9 and X7. Revise all elevations shown on profiles and cross sections sheets.	
52	Show balance points on profile sheet. See PPG and attached file for guidance.	
53	Ensure that the District Traffic Engineer reviews the traffic control plan.	
54	Add volumes for earthwork to cross sections. See cross sections. See PPG for Guidance.	
55	Add begin and end bridge notes to cross sections.	
56	Add pavement structure (Depth) to cross section templates. See cross sections.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-37	**Rd./Rte. Name:**	Compton Bridge Road	**File No.:**	42.041000
County:	Spartanburg	**Project Description:**	Pedestrian Improvements in the City of Inman		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	01/25/2012	**Reviewed By:**	AH, JT, TD		

Comment No.	Comment	Response
1	The File Number and Project Number should be shown on the Title Sheet. Reference SCDOT Instructional Bulletin 2011-5 for Guidance on the Title Sheet layout.	
2	There is no traffic data shown on sheet 1. The design year is measured from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
3	The current SDCOT standard is to use the 2001 AASHTO "A Policy on Geometric Design of Highways and Streets." The title sheet reference's the 2004 guide which has not been adopted. Adjust accordingly.	
4	At the end of Sheet 9A and the beginning of Sheet 10A, there is a note referencing the placing of 129 LF of 24" SWP shown on both sheets. This should only be shown on one sheet while the other sheet references the previous sheet.	
5	The plans show the placement of 31 Feet of 15" Smooth Wall Pipe on sheet 7A but there is no quantity for it on the Summary of Estimated Quantities.	
6	The plans show the construction of manholes throughout the project but there is no quantity for them on the Summary of Estimated Quantities.	
7	The following drainage quantities do not match what is shown on the plan sheets: • 18" SWP • 24" SWP • Catch Basin – Type 17 • Catch Basin – Type 9 Verify and adjust accordingly.	
8	Projects with more than One Acre of disturbed area should include an Erosion Control Data Sheet. Reference SCDOT Instructional Bulletin 2011-4.	
9	Throughout the plans "Separated" is spelled "Seperated."	

Comment No.	Comment	Response
	Bicycle and Pedestrian Comments	
10	PROWAG (2005 Revised Draft Guidelines for Public Rights of Way) section R305.2.2 requires that all crosswalks (the passage between two ramps) have a maximum cross-slope of 2 percent. Please review and achieve if possible.	
11	Standard drawing 720-410-00 depicts a 3'-0" wide minimum pedestrian clear width at driveway aprons. We are in the process of updating our standards to reflect the 2005 PROWAG requirement which specifies a 4'-0" wide minimum clear width. If it is reasonable to achieve a 4' clear width within the constraints of the project, please do so.	
12	Note for ramp at ***south*** side of Park Street should reference Standard Drawing (720-910-01—***Detail 16***).	
13	Using Standard Drawing 720-910-01 for the construction of curb ramps presumes that the sidewalk is immediately behind the curb, in other words, that there is no planted strip. Recommend that at the approaches to these ramps, the planted strip end and that the sidewalk be widened to meet the back of curb. This should occur (when viewed as one approaches each ramp) at the final expansion joint in advance of the ramp. This applies at the intersections with Hicks Drive, Golightly Street, Johnson Avenue, Shoreham Drive, and Shoreham Lane.	
14	Somewhere between STA 27+00 Left and STA 29+00 Left, maps show a T-intersection with Cardinal Street. Cardinal Street should be more precisely located on the plans and a curb ramp to the sidewalk is needed here to allow pedestrian traffic to and from Cardinal Street to access the sidewalk. Adjustment to the location of the nearby driveway may be necessary.	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	S-1675&S-2383	**Rd./Rte. Name:**	College St. and Eastview Dr.	**File No.:**	3240.040622
County:	Lexington/Richland	**Project Description:**	Town of Irmo Sidewalk		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/29/2012	**Reviewed By:**	SSS		

Comment No.	Comment	Response
	Old Comments:	
1	Station 25+50 L —Note says to construct a 50' wide driveway apron, which is non-conforming. Please consult with the ARMS manual for appropriate driveway widths. http://www.scdot.org/doing/pdfs/ARMS_2008.pdf	
	New Comments:	
1	Provide all needed seals, signatures, initials and dates on final construction plans.	
2	Check index of sheets. There are 26 plan sheets submitted. Revise index accordingly.	
3	The Hydraulic Design Reference Label should be shown on the title sheet.	
4	Show alternate pipe on the quantity sheet per IB 2009-4 and how to show/label it in the plans.	
5	Include pay items for Right of Way Plat (8091050) and Right of Way Marker - Rebar and Cap (8091010) in Summary of Estimated Quantities (Preconstruction Advisory Memorandum 8) when new right of way is needed.	
6	Reference Supplemental Technical Specifications SC-M-810-2(04/11) for guidance on Seeding Quantities	
7	Reference Instructional Bulletin 2005-1 for guidance on Pay Items that should not be shown in the plans.	
8	The use of pay item "9581500 Erosion Control" should be justified. If appropriate justification cannot be submitted, standard Erosion Control Pay items should be used in the plans.	
9	Is Liquid Asphalt Binder needed for this application of HMA surface course?	
10	All pay items not detailed within the plans should be shown on the General Construction Note with a description of their use.	
11	Update the current note on the General Construction Note to read with "The Deputy Secretary for Engineering."	

Comment No.	Comment	Response
12	Erosion Control Items are listed as "Lump Sum Items" on the General Construction Note, but are broken down as Erosion Control and Seeding Items on the Summary of Estimated Quantities. Erosion Control and Seeding Items should be shown on the General Construction Note as they are not shown anywhere else in the plans.	
13	Revise alignment control note to reference the correct sheets.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-13,S-289	**Rd./Rte. Name:**	N. Main Street, N. Miller Street	**File No.:**	42.039765
County:	Spartanburg	**Project Description:**	Inman Intermediate and Middle School SRTS		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1/25/11*Rev. 12/10/12	**Reviewed By:**	TD, JT, RK		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	TD	8	*Previous Comment 3* It is unclear if Parkview Drive intersects N. Main Street (from the left of survey) within the project limits. If it (or any other road) intersects N. Main Street on the side opposite from where a sidewalk is being constructed, it is required that curb ramps be provided to provide access for pedestrian traffic going to and coming from that side road. Similarly, provide a paved connection to provide access from Orchard Lane pedestrian traffic onto and off of the existing sidewalk at that T-intersection near STA32+60RT.	URS will provide a ramp on the east side of Pineview Drive at the existing crosswalk on N. Main Street. URS will provide a ramp on the west side of Orchard Lane. URS has shown a new ramp on the east side of Orchard Lane connecting new sidewalk along north side of N. Main Street to existing sidewalk along east side of Orchard Lane.	2
			Provide a ramp onto the sidewalk on the south side of North Main Street opposite Orchard Lane, as an unmarked crosswalk exists here.		
2	TD	3	*Previous Comment 4* Indicate the design speed used (such as to determine the curb offset from the edge of travelled way).	The posted speed is 35mph on N. Main Street, and the speed limit on N. Miller is 25mph. URS will add to the Typical Section sheet.	2
			Design speed will be needed to determine appropriate clear zones and other design criteria. ADT is needed to establish clear zone, reference Fig.14.3A in the HDM.		
3	RK	X2-X7	The placement of the wall should be coordinated with the clear zone to ensure roadside safety is established. Appropriate roadside barrier will be needed if the wall is within the clear zone. 2:1 fill slopes should be evaluated for roadside barrier.		1

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	N/A	**Rd./Rte. Name:**	Between Lawrence St and Spartanburg Road	**File No.:**	42.041198
County:	Spartanburg	**Project Description:**	Town of Lyman Enhancement Project		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	6/8/12	**Reviewed By:**	KS, TE, JT, TD		

Comment No.	Comment	Response
1	Provide a better map on Title Sheet, such as a Town of Lyman map, to show project location – map shown is too large of scale to be of use.	
2	Clearly indicate extents of work on Vicinity Plan with arrows showing "Begin" and "End" of project.	
3	The design year ADT should be measured from the expected construction completion date (HDM Section 9.6.2.1). Revise traffic data on title sheet for a 20 year period beginning after construction. Mainline Traffic Data refers to which road?	
4	Utilities should be placed on first Plan Sheet, not on Title Sheet.	
5	Show Balance Points with Excavation on Profile Sheets.	
6	Plans must have signing and marking plans.	
7	On Typical Section, label cross section on shared use path as 2% MAXIMUM. The AASHTO Guide for the Development of Bicycle Facilities recommends a 2'-0" buffer each side of the path with a maximum slope of 1:6.	
8	Do not label project as "Multi-Use Path," instead use the AASHTO-standard term "Shared Use Path."	
9	Sheet 6—From the plans and Google imagery, there are some sort of roads on either side of the tracks. That would be a concern relative to the safety of path users. Confirm that they can be closed. They appear to be redundant access to tracts at the rear of the property. A detail of the beginning point of the pathway showing the bollards (or whatever means is proposed) to keep motorists off this facility. Showing bollards at STA 13+50 implies that the facility would be open to motorists from Lawrence Street up to that point and that is not permissible. Plans indicate the construction of a driveway onto Lawrence Street—why? A curb ramp is more appropriate.	
10	Existing sidewalk on this side of Lawrence Street (S-42-524) appears (in Google Streetview) to be riddled with accessibility issues; within project limits it should be reconstructed to tie to existing.	
11	Relative to Note (3) on Sheet 6, no existing "trussels" (?), "nor	

Comment No.	Comment	Response
	"trestles"(sometimes 'tressels,' rigid frames used as a support in a bridge composed of a number of short spans supported by such frames) were located to be retained. There were existing train tracks apparent in Google imagery. They cannot be allowed to be retained for safety reasons.	
12	Sheet 7—at STA 16+40 RT, verify if existing utility pole will be within 3 feet of the edge of the pathway. If it is consider relocating it, or shielding it per AASHTO bike guide page 36.	
13	Explain the symbology/ meaning of the alternating dark/light wide line beginning near STA 18.	
14	Sheet 8—why are bollards so far from the intersected road—move them right up to it.	
15	Sheet 8—area within intersection with Crescent Street (Spur?, S-42-667) is noted as an 'exception to project' to be done under separate contract. As such the critical issues of roadway/pathway intersection cannot be reviewed as it should be since it is so essential to this project. Again it appears that conflicting driveways are in place (too close to the intersection) that should be closed before this project advances.	
16	Sheet 9—the intersection with Spartanburg Road (SC-292 Connector) should be shown in greater detail . Within the rights of way of SC-292 Connector and the former railroad, the pathway should be curved so as to intersect Spartanburg Road at as close to 90 degrees as possible.	
17	What is going on sheet L-104, portions of this sheet is blacked out, including the Plant Legend? We were able to get a copy of the original sheet L-104 from the landscape architect for the project, but Plans should be corrected.	
18	On the original version of sheet L-104, the Sugar Maple root is shown as *bare root* and under comments, listed as *pink variety*. I believe the root is *B&B* and the *pink variety* goes under the Pink Muhly Grass. The Sugar Maples appear to be planted 35 feet on center. The spacing could be increased to 45-50 feet on center.	
19	Under general notes, no-mow grass is mentioned. There is no such thing as no-mow grass. Please change.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	I-20 & US 378	**Rd./Rte. Name:**	I-20 & US 378	**File No.:**	32.041792
County:	Lexington	**Project Description:**	Interchange Beautification		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	9/19/2012	**Reviewed By:**	TE, JT		

Comment No.	Comment	Response
1	It will no longer be necessary to put 8110001-LANDSCAPING-NEC.-LS on sheet 2 of the SUMMARY OF ESTIMATED QUANTITIES sheet.	
2	Please refer to the attached sample of how the plant list should appear on sheet L-1. Please add ITEM NO. & ITEM DESCRIPTION columns to your LANDSCAPING PLAN LEGEND.	
3	Are all of the planting details on sheet L1?	
4	On sheet L-1, please add the following note to the tree planting detail or landscaping general notes: *Place the plant in the pit so that the root flare is even with the finished grade level. It may be necessary to remove soil from the top of the root ball in order to expose the root flare*	
5	On sheet L-1, will the ***Rosemarinus officianalis Lockwood de Forest*** be hardy enough to grow on the embankment?	
6	In general, the landscaping plan is very well done, but the plan can be simplified since it will be viewed at 60 MPH?	
7	Long term, it may be a good idea to change the wildflower mix areas to additional areas of switchgrass or lovegrass.	
8	When written specs become available, please let me review them	
9	Is there any information about the irrigation system?	
10	There are curb changes planned in the vicinity of Corley Mill Road and US 378. Can someone check to see if that these changes could have some effect on sheet L-3?	
11	I have concerns about sheet L-3. There appears to be 3 water features on sheet L-3; two on the sign and one near the palmettos. I suggest that the water feature near the palmettos be dropped. Funds could be spent instead on low shrubbery along the new fence, continuing to the area near the John Deere property.	
12	(if possible) The existing wild cherry trees in the Lexington-side loop should be retained as they seem to be doing well. The lower limbs can be removed if desired.	
13	The sign presented is a preliminary rendering and lacks the detail	

Comment No.	Comment	Response
	needed for a quality assurance review. Please continue to develop the design to show constructability — details and sections.	
14	Provide a plumbing design (fountains).	
15	Provide an electrical design (pumps).	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	NA	**Rd./Rte. Name:**	Pine Street Elementary	**File No.:**	42.037774A
County:	Spartanburg	**Project Description:**	SRTS		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	11/27/12	**Reviewed By:**	SSS		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	SSS	1	Add traffic data to the title sheet if applicable		
2	SSS	2	Remove pay items 1031000 and 1050700 from the quantity sheet per IB 2005-1. (http://www.scdot.org/doing/road_Instruct.aspx)		
3	SSS	2&6	Add alternate pipe and label pipe on the plans per IB 2009-4. (http://www.scdot.org/doing/road_Instruct.aspx)		
4	SSS	2&5	Any pay item amount not clearly labeled in the plans or able to be calculated from the plans needs to be included on the GCN.		
5	SSS	3	Pay items shown on the typical section need to match those being used on the quantity sheet. Revise accordingly.		
6	SSS	X sheets	Label earthwork volumes on the cross sections. See HDM for guidance.(HDM 34.2.18.1)		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	NA	**Rd./Rte. Name:**	Oak & Boundary	**File No.:**	26.040693
County:	Horry County	**Project Description:**	Oak & Boundary Street sidewalk in the City of Conway		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	9/11/2012	**Reviewed By:**	SSS, TE, TD, JT		

Comment No.	Comment	Response
	Landscaping comments:	
1	On sheet L-104, I suggest that the applicant consider using hybrid upright crape myrtles instead of the older indica-type crape myrtles. Please list variety of crape myrtles, such as *Miami* (dark pink), *Biloxi* (pale pink) or *Natchez* (white).	
2	On sheet L-104, in the Plant Material List, the root condition for the crape myrtles is listed as bare root. In most other situations, the root would be listed as #15 or #30 container, or B&B. Please change to a container size or B&B.	
3	On sheet L-104, please add the following note to the tree planting detail or landscaping general notes: *Place the plant in the pit so that the root flare is even with the finished grade level. It may be necessary to remove soil from the top of the root ball in order to expose the root flare*	
4	On sheet L-104, no multi-trunked tree detail was provided.	
5	On sheet L-104, note # 16 states that sod shall be centipede grass. On sheet 3A, the permanent grass is common Bermuda.	
6	At the end of sheet L-102 and the beginning of sheet L-103 there is an overlap of crape myrtles. I suggest that a line and note be added to both sheets showing the overlap on the two sheets..	
7	On sheet 3A, in the permanent seeding schedule, there is no note stating that *sericea lespedeza is not required on slopes under 5 feet in height.* Please review permanent seeding schedule.	
8	Please verify that adequate intersection sight distance is provided based on site conditions (posted speed, grade, etc.).	
9	Ensure that the District Traffic Engineer reviews the traffic control plan.	
10	Remove staking and guying of trees one year after planting.	
	Pedestrian and Bicycle Comments:	

Comment No.	Comment	Response
11	Title Map has North arrow about 45degrees off true north	
12	Sheets 3,6, and 7 show sidewalk being constructed along Oak Street. "SIDEWALK NOTE" on Sheet 6 indicates three segments, apparently breaking at two existing driveways, yet four driveways are shown on the plans and on Google aerial imagery—reconcile.	
13	Unless the required 4-foot wide, 2.0% (maximum)cross slope Pedestrian Access Route mandated by PROWAG can be assured to be available across any driveway, that driveway will need to be rebuilt so as to provide it. Begin and end sidewalk segments at existing sidewalks not at the edge of driveways to assure that this requirement is not cheated.	
14	Detailing the extent of Detectable Warning Surface needed at the termini at Duckett Street and at Boundary Street would be helpful in determining quantities and guiding the contractor to place it wherever the walkway surface is flush with the pavement of the streets.	
15	Sheet 8—southeast corner of Floyd Street and Boundary Street is within project limits. Verify that there is an existing PROWAG-compliant curb ramp on this corner or show one being installed there.	
16	Sheet 8-- Mapping shows an unnamed public street (with sidewalks) intersecting Boundary Street from the north between Williams Street and Floyd Streets, and possibly a second public street (this one appears not to have sidewalks) intersecting Boundary Street between Floyd and Duckett Streets. To provide access between this sidewalks of the unnamed public street to the north and the new sidewalk, a curb ramp with detectable warnings must be installed in the new sidewalk, and it is recommended that if the second road is actually a public street, that the same be considered there.	
17	Sheet 9— pedestrian traffic emerging from Blake Street and intending to travel either direction on Boundary Street will be required by law to cross Boundary Street to access the sidewalk as it is illegal to walk in the road when there IS a sidewalk. Unless a paved connection across the grass strip is provided to allow access for persons with disabilities to make this passage, such users may be forced to break the law, and everybody else will beat a path and kill the grass.	
18	Vicinity plan does not graphically indicate the start/ end of Oak Street Work.	
19	Sheet 3A —Although the sheet says "for information only", it appears that new work is presented here. Therefore: a. Construction Notes, note 6 — Incorrect reference to slope.	

Comment No.	Comment	Response
	Only ramps may be slopped 12:1 (which is 8.33%); transitions from existing to new sidewalk shall comply with PROWAG. Cross-slope 2% max each direction and running slope not to exceed 5% or the general street running grade (R301.4). b. Delete all references to 12:1 sidewalk slope in Plans. Any portion of the sidewalk > 5% to 8.33% is considered a ramp, and shall comply with PROWAG section R303 Curb Ramps and Blended Transitions, or, PROWAG section R406 Ramps. c. Regarding transitions and tie-ins to existing work: any deficient, existing sidewalk slopes immediately adjacent to new Work shall be made code compliant.	
20	Provide site specific references to SCDOT Standard Drawing Ramps at every location where ramps are required. I.e., at station 11+31 provide a specific ramp design. It is unclear how a 4'-0" wide, level path shall turn the corner adjacent to the ramp. (This note applies to other similar conditions such as: Sheet 7, station 18+42; Sheet 8, stations 28+53 & 30+80; Sheet 10, terminus). The sidewalk notes provided lack sufficient information to address the aforementioned clearance issues.	
21	Station 12+80 — It is unclear how the sidewalk transitions into the driveway; provide a note that describes such tie-in. The tie-in shall comply with PROWAG, and all other similar conditions in the Plans should be addressed.	
	Roadway Comments:	
22	Include 1-foot area between the back of sidewalk and the right of way line per HDM Figure 21.2C and 22.2Cof the HDM.	
23	Show alternate pipe on the quantity sheet per IB 2009-4 and how to show/label it in the plans.	
24	Revise the end note on the cross sections for Boundary Street to read end, not begin.	
25	The Summary of Estimated Quantities sheet needs to show the combined amounts. Do not break the quantity amounts down by street. Do the same with the ECDS.	
26	The plans have 15" SW pipe labeled on sheet 7. This pay item is not included on the quantity sheet. Revise accordingly.	

In-House

Interstate/Interchange

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC-14 & I-385	**Rd./Rte. Name:**	Interstate 385 and SC Route 14	**File No.:**	30.039266
County:	Laurens	**Project Description:**	Interchange Improvement at Exit 19		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12-21-10	**Reviewed By:**	JKL, BTN, SWG, VM		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year should be measured from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
2	Show the specified type of mix that is noted in the Pavement Design in the legend on the Typical Section Sheet (See Instructional Bulletin 2001-17).	
3	Show concrete median on SC 14 on typical (See sheet 3 & sheet X1-X3).	
4	Show control points and bench marks on Reference Data sheet (See Instructional Bulletin 1997-11).	
5	Ensure appropriate design at the gore area for Ramp G and SC 14 (sheet 8). Possibly utilizing a 2' radius and offsetting the nose the width of the shoulder would be beneficial.	
6	Based on the horizontal curve data for Ramp G, a design speed of 55 mph has a minimum radius of 965 feet and a maximum superelevation of 8%. Refer to SCDOT Highway Design Manual Figure 16.5C for guidance. Verify and revise accordingly.	
7	The vertical curves for Ramp G do not meet a 55 mph design speed. Verify and revise accordingly.	
8	The typical travel way width of a ramp is 16' with 10' shoulders of which 4'to the left and 6'to the right are paved. It is not clear as to what widths Ramp G is using for the shoulders or the travel lane. It seems to include the right shoulder within a 21' width. Please clarify and revise. Also clarify typical section if needed.	
9	Match lines shown in cross sections, SC 14 REL Sta. 56+00 for example have no reference as to where or what they match to.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC-14 & I-385	**Rd./Rte. Name:**	Interstate 385 and SC Route 14	**File No.:**	30.039266
County:	Laurens	**Project Description:**	Interchange Improvement at Exit 19		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	6/5/2012	**Reviewed By:**	SSS		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year should be measured from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	**Traffic data has been revised.**
2	Use latest title sheet per IB 2011-6	**Revised**
3	A thorough review of the quantities could not be performed because inclusion item amounts were missing from the GCN.	**Will update once we go to the construction DFR the summer of 2013**
4	Verify that quantity amounts on the quantity sheet match those in PES, see pay item 7144518 for example.	**Revised**
5	Recheck quantity for pay items 4011004, 810500, 8151110. Revise accordingly.	**Revised**
6	The quantity for pay item 4020310 Hot Mix Asphalt Intermediate Course Type A on the quantity sheet is the same amount as the GCN. This pay item can be calculated from the typical sections and does not need to be reflected on the GCN. Revise accordingly.	**Revised**
7	Ensure appropriate design at the gore area for Ramp G and SC 14 (sheet 8). Possibly utilizing a 2' radius and offsetting the nose the width of the shoulder would be beneficial.	**Gore area left as is. Designed as a fork for low speed section of SC14.**
8	Need approval on all typicals for the pavement design	**Pavement design will be signed prior to Construction obligation. As it is currently scheduled we will need to have the design revised prior to letting.**
9	Remove pay item fine grading from the GCN per IB 2001-14	**Revised**
10	Superelevation for SC-14 does not adhere to the standard 2/3 Maximum S.E. at the PC station. Revise accordingly or give justification.	**Project began in a superelevated section. Note on cross sections will be revised to match existing cross slope.**
11	The vertical curve for Ramp A does not meet a 55 mph design speed. Verify and revise accordingly.	**The vertical curve was designed for a stop condition.**
12	Use latest ECDS per IB 2011-4.	**Needs to be completed**
13	Add a note to all cross sections where slopes tie to other slopes for different alignment. See sheet X2 for example.	**Revised**

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	US-25/SC-11	**Rd./Rte. Name:**	US-25/SC-11	**File No.:**	23.037129A
County:	Greenville	**Project Description:**	Interchange Ramp		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	2/17/2012	**Reviewed By:**	SSS, JKL, BTN		

Comment No.	Comment	Response
1	Confirm all design exception requests and submit final approved copies to Preconstruction Support to be incorporated with the final construction review.	The design exception request was approved by SCDOT on 3/30/12.
2	In reference to the title sheet, SCDOT has not adopted the AASHTO's "A policy on Geometric Design of Highways and Streets" 2004. All design references for these plans should be based on AASHTO's "A policy on Geometric Design of Highways and Streets" 2001.	Revised.
3	Revise the traffic data shown on sheets 1and 1A. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	Revised to reflect the years 2013 and 2033 per SCDOT HDM Section 9.6.2.
4	Could not locate pay item 8057100 in pay item list. Revise accordingly.	This was used per the pay item number listed in SCDOT Standard Drawing 805-710-00, dated January 2011. Henry Cross of SCDOT verified on 3/28/12 that we should use this pay item number and not the one listed on the old pay item list.
5	Remove pay item 1050800 from Summary of Estimated Quantities sheet per IB 2005-1.	Pay item removed.
6	Quantity amount on the GCN should be integrated correctly with the amount listed on the Summary of Estimated Quantities sheet. See pay item 2027000 for example. Revise accordingly	Revised "Removal and disposal of existing asphalt pavement" and "Remove & disposal of existing concrete" on GCN to match Summary of Estimated Quantities.
7	Recheck quantity amount for pay item 8058100. Revise accordingly.	Rechecked and quantity appears to be correct.
8	Typical section 7 on sheet 3D needs a station range.	Station range added to typical section 7.
9	Need approval on all typical sections for the pavement design.	Ok.
10	Use correct note on the General Construction/Inclusion sheet. See IB 2003-6 for guidance.	Revised to use correct note.
11	Silt Basins on the Erosion Control Inclusions on sheet 5 should be Cleaning Silt Basins. Revise accordingly.	Revised.
12	Label taper, reverse radius, and storage length in plan sheet for left turn lane (sheet 8).	Taper, reverse radius, and storage length added for left-turn lane on sheet 8.
13	Add unclassified excavation notes to profile sheets.	Notes added.

Consultant

Interstate/Interchange

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	Interstate I-73	**Rd./Rte. Name:**	Interstate Route I-73	**File No.:**	17.041498
County:	Dillon	**Project Description:**	From: Interstate 95 To: US Route 501		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	5/2/2012	**Reviewed By:**	CWB		

Comment No.	Comment	Response
	Comments from the Construction Review Responses needing to be readdressed.	
1	Utilize the latest title sheet for consultants in plans. See IB 2011-5 for guidance. ***Response: Do not remove the AASHTO 2001 or the Hydraulic 2009 Design References from the Title sheet. Title sheet submitted for the construction review is ok.***	**All info currently on Title sheet. Deleting AASHTO 2001 and Hydraulic 2009 Logo's, and Legend. Location Map and I73 Logo are project specific and were left on Title sheet.**
2	The quantity for 7143642 42" Smooth Wall Pipe 2434.000 LF appears low. Based on the plans submitted for the Construction Review an additional quantity of more than 10% may be needed.	
3	The following quantities appear low. Based on the plans submitted for Construction Review an additional quantity of more than 10% may be needed. Recalculate the quantities listed below used for Sediment Dams. 8048210 Geotextile for Erosion Control Under Riprap (Class 2)Type C 1907.000 SY 8156300 Sediment Dam Riprap 3,740.000 TON 8156405 Aggregate No.5 for Erosion Control (6" Uniform) 679.000 SY	

In-House Intersection Improvement

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	US 178 & SC 93	**Rd./Rte. Name:**	Pickens Drive and East & West Main Street	**File No.:**	39.039303
County:	Pickens County	**Project Description:**	Intersection Improvement		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	7/6/12	**Reviewed By:**	KS, BN, JT		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	**Completed**
2	The maximum cross slope on sidewalk is 50:1. Revise typical sections accordingly. Refer to SCDOT Highway Design Manual Chapter 21 Section 21.10.2.	**Completed**
3	Missing Present and New Right of Way Information for SC 93 (East Main Street) on Plan Sheets 6 & 7. Refer to Instructional Bulletin 2012-2 for guidance.	**Property Plats have been requested for R/W verification by W.A.C. on 7-11-12. District R/W is aware of this and we are working with them to get the information on the plans.**
4	Missing Datum Assumed information on Reference Data Sheet.	**Completed**
5	Utility Owners Note should be placed on the First Plan Sheet.	**Completed**
6	Missing Curb Grades for SC 93.	**The curb grade in question is less than 300' and is not required to be profiled in the plans.**
7	Cross sections missing labels for present and new right of way. Refer to Instructional Bulletin 2012-1.	**Completed**
8	SCDOT Road Data Services recognizes the functional classification of route SC 93 as an Urban Arterial. In accordance with current SCDOT design guidelines, urban arterial should be designed with a lane width of 12' (sheet 6). Refer to SCDOT Highway Design Manual Figure 21.3A for guidance.	**Completed**
9	The taper for the right turn lane near Station 17+00 (sheet 7) of route US 178 should be a minimum of 150 feet based on design speed of 35 mph. Refer to SCDOT Highway Design Manual Figure 15.5H.	**Completed**
10	Provide more throat width for the travel lanes at the intersection to allow design vehicle to make turns without encroaching onto opposing lanes or onto curb and gutter.	**Design vehicle used was a school bus. The vehicle can make the turning movement without encroaching.**
11	The reverse radius along US 178 should have a minimum of 480 feet. This is based on a design speed of 40 mph.	**Completed**

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 773	**Rd./Rte. Name:**	SC 773	**File No.:**	NA
County:	Newberry	**Project Description:**	SC 773 over I-26		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10/5/2012	**Reviewed By:**	JL, BN, SSS		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
2	In reference to the typical section on sheet 3, if the design speed is greater than 45 mph then curb and gutter adjacent to high speed roadways should be of the sloping type curb and should not be located closer to the traveled way than the outer edge of the shoulder. Refer to SCDOT Highway Design Manual Section 21.2.9.	
3	The WB-62 design vehicle cannot make the right turn onto County Road off of SC 773 without encroaching into opposite lane or beyond shoulder. The throat width along SC 773 does not appear adequate for right turn movements from S-521 onto SC 773. It is unsure the purpose of the 24 feet lane widths used on the side roads, considering this is excessive by SCDOT Standards. Revise accordingly.	
4	The lane transition tapers on SC 773 do not meet the 50 mph design speed specified on Sheet 3. Verify and revise accordingly. See SCDOT Highway Design Manual Figure 15.5K for guidance.	
5	Provide Beginning and End Stations for Tapers along SC 773.	
6	Consult with Traffic Engineering Division to determine if SC 773 will require left turn lane storage for left turns onto S-521.	
7	Show Alignment Control Note on all plan sheets.	
8	Add station to VPC's and VPT's on profiles.	
9	Some cross sections show retain existing pavement for SC-773. This needs to be reflected on the typical section. See cross-sections 115+00 to 118+50 for example.	
10	See cross section 115+50. Looks to be a stray line on left side of cross section or not drawn correctly. Revise accordingly.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-548	**Rd./Rte. Name:**	Roper Mountain Road	**File No.:**	23.039283
County:	Greenville	**Project Description:**	Intersection Improvement		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5/4/2012	**Reviewed By:**	SSS, JKL, TD		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	Will change once construction letting is known.
2	Add the Alignment Control note to plan sheets. See IB 97-11	Note added
3	The vertical curves at VPI Station 28+00 (sheet 6) and VPI Station 33+25 (sheet 7) do not meet the minimum length based on the design speed of 45 mph.	Design speed through curves has been adjusted to 40 mph. Posted speed is currently 40 mph. Superelevation through curve has also been adjusted to 40 mph.
4	Based on the superelevation transition given between curves at PI 29+04.77 and 38+95.21 there is a flat section of roadway around station 33+49.77. (see section 11.3.6 of the HDM for guidance) In addition show cross sections every 50' from station 31+00.00 to 36+00.00 to better illustrate the transition between these curves and give more detail for constructability.	Super elevation revised to remove flat cross slope at point between reverse curves
5	Verify that elevations on curb grades match the elevations shown on the cross sections. See cross section 33+00.00 for example.	Curb grades within acceptable tolerance. Will make rounding adjustments for const. plans
6	Add Right of Way on cross sections per IB 2012-1	RW labels added to cross sections
7	Verify that design vehicle can properly maneuver all turning movements at the intersection of S-548 and S-564	Raised medians and radii revised to accommodate movements for WB-50
8	At the beginning of project, the proposed travel lanes are wider than the existing lanes. Recommend providing tapers to tie in and transition properly	Revised tapers
9	A minimum 670 feet reverse radii should be provided for the left turn lane along Roper Mountain Road (sheet 6 and 9).	Revised radii.
10	The corner radius for Tammy Rae Drive appears to overlap into the existing travel lane where the proposed changes tie-in. Revise accordingly.	Corner radius corrected
11	Recommend revising taper that follows curve to provide a smoother transitioning from 2 to 1 lane along Garlington Road (sheet 10).	Not revised
12	Label Tapers with beginning and end stations.	Tapers labeled
13	On Typical Section label sidewalk cross slope as 50:1 MAX. On the Legend, Item (5) should be "CONCRETE SIDEWALK (4" UNIFORM)."	Typical revised to reflect recommendations

Comment No.	Comment	Response
14	At the beginning on Roper Mountain Road, at the intersection with a private road, STA 16+80 LT, make certain a sidewalk curb ramp is provided.	Item typically not shown on road plans
15	At intersection with Garlington Road, crosswalks are intersecting triangular islands too close to the island's end point—there is insufficient room to develop proper ramps, landings, pedestrian detectors (if used) and avoid conflict with each other. Suggest detail drawing of each island. Will islands be cut though with channels or provided with ramps to allow users to ramp up to the top of the island to pass across the island?	Item typically not shown on road plans
16	If any driveways will be other than drop-curb types as referenced in the SCDOT Standard Drawings, please so indicate. All driveways at sidewalks must allow the pedestrian accessible element (4-foot wide, 2% Max cross slope) to be continued across.	Item typically not shown on road plans
17	Will owners of Parcel (38) accept right-in/right-out access?	To be addressed by RW field agent
18	Patterning error in the TWLTL between STA 35+00 and STA 45+00?	Patterning revised to show angled in curved sections
19	Provide sidewalk curb ramps at the intersection of Roper Mountain Road and Snipes Road and Tammy Rae Drive	Item typically not shown on road plans
20	Provide sidewalk curb ramps at the intersection of Roper Mountain Road and Roper Mountain Court; also at Young Court, and at Feaster Road.	Item typically not shown on road plans
21	Since the intersection of Feaster Road and Roper Mountain Road is signalized, in addition to the sidewalk curb ramps necessary to cross Feaster Road, also provide sidewalk curb ramps to facilitate crossing Roper Mountain Road.	Item typically not shown on road plans

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-624	**Rd./Rte. Name:**	Strange Road	**File No.:**	23.039301.1
County:	Greenville	**Project Description:**	Intersection Improvement at S-624 and S-166		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	12/20/2012	**Reviewed By:**	SSS		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	SSS	5A	Verify that the correct e value is being used for the superelevation on curves 2-1 and 2-3. See the chart on page 11.3(4) of the HDM for guidance. Revise accordingly.		
2	SSS	6 & 7	Label the reverse curve tapers on the plan sheets and verify that they comply with chart 15.5(11) of the HDM.		
3	SSS	6 & 7	Add the station number to the VPC and VPT notes on the profiles.		
4	SSS	12	Elevations on the curb grade profiles need to match those shown on the cross sections. Revise accordingly.		
5	SSS	ECDS	Use latest ECDS per IB 2011-4		
6	SSS	X4	Multiple elevations on top of each other on the side of the cross section sheet		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	US 21	**Rd./Rte. Name:**	Trask Parkway	**File No.:**	7.041192
County:	Beaufort	**Project Description:**	US 21 at US 21 Bus. Intersection Improvement Right Turn Lane Addition		
Type of Submittal:	[redacted] ROW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/17/2012	**Reviewed By:**	CWB, BTN, JKL		

Comment No.	Comment	Response
1	Erosion control sheet is not required in plans when the NPDES area is less than 1.0 Acre. Revise the index of sheets. See Plan Preparation Guide and SCDOT Highway Design Manual for guidance.	
2	Ensure that the railroad involvement indicated on the title sheet is correct. See sheet 1.	
3	Revise ending station shown on typical section (sheet 3A), plan (sheet 7), and cross sections (sheet X4) for Parris Island Gateway. Ending station shown is missing the numerical digit 0.	
4	Add standard drawing reference for Curb & Gutter/Sidewalk to typical sections. See sheet 3 and 3A.	
5	In reference to the typical sections, if the design speed is greater than 45 mph then curb and gutter adjacent to high speed roadways should be of the sloping type curb and should not be located closer to the traveled way than the outer edge of the shoulder. Refer to SCDOT Highway Design Manual Section 21.2.9.	
6	Add curb grade profile data to plans. See sheet 5A. See SCDOT Highway Design Manual Section 34.2.6.3 for guidance.	
7	Add superelevation information to curve data.	
8	Pavement beyond the second lane should have a cross slope of 36:1 (2.78%). See SCDOT Highway Design Manual Section 13.2.3.3.	
9	All projects with roadway and railroad interfaces need to show right of way; owner of all tracks; distance to nearest railroad mile post; US DOT crossing number where an at-grade crossing is within the project limits; details of present and proposed roadway cross sections; finished roadway grade to match top of the rails (in some instances, the rails may be adjusted if approved by the Railroad Company); actual location of curb, median or sidewalk from tracks (minimum of 12 feet from centerline of nearest track is required). Refer to SCDOT Highway Design Manual Section 6.3.1 for guidance.	
10	See Railroad Company Websites for guidance on railroad specific design information. See sites links www.csx.com; www.nscorp.com; and www.railamerica.com;.	

Comment No.	Comment	Response
11	Show railroad tracks on plan sheets.	
12	Maintain minimum horizontal clearance for railroad.	
13	In reference to the typical sections, SCDOT Road Data Services recognizes the functional classification of US 21 as Urban Arterials. In accordance with current SCDOT design guidelines, urban arterials should be designed with a lane width of 12'. Refer to SCDOT Highway Design Manual Figure 21.3A for guidance.	
14	Coordinate with Right of Way to ensure construction limits will not affect Railroad Right of Way. It appears that railroad appears to be close to existing travel lanes which will affect proposed right turn lane. Also, Railroad utilities appear to be in existing corner radii that will need to be moved for new turn lane. Verify accordingly.	
15	Add volumes for earthwork to cross sections. See SCDOT Highway Design Manual for guidance.	
16	The 0.3 percent grade is not being meet throughout the entire curb grade. See SCDOT Highway Design Manual Section 12.2.3.3 for guidance.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US21/ S-487/ S-159	**Rd./Rte. Name:**	Anderson Rd./Princeton Rd./Springsteen Rd.	**File No.:**	46.040019
County:	York	**Project Description:**	US21/ S-487/ S-159 Intersection Improvement		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	4/5/2012	**Reviewed By:**	RLK, TD, JPT		

Comment No.	Comment	Response
1	Include project file number in PES.	
2	Include beginning and ending stations within location map note on title sheet (PPG page 1-3).	
3	Provide initial and date on construction title sheet for "RPG-Hydrology."	
4	Provide EOR signature and date on final construction plans.	
5	The pay item for Fine Grading should be placed only on the Summary of Estimated Quantities Sheet (IB 2004-14). Remove pay item from General Construction Sheet.	
6	A pay item for Sodding is included on General Construction Sheet as an inclusion item. Add Sodding to Summary of Estimated Quantities if needed.	
7	Summary of Estimated Quantities includes a pay item for variable milling. Typical sections detail 2" uniform milling. Verify which pay item is appropriate and revise where needed.	
8	Plans (pipe table plus General Construction Sheet) appear to call for more 18" Smooth Wall Pipe than is shown in the Summary of Estimated Quantities. Pipe table shows pipes lengths for NP-1, NP-2 NP-7 and NP -37 that do not match the lengths found in the project quantity folder. Pipe length for NP-39 does not appear to be accounted for in the project quantity folder. Verify quantity and revise Summary of Estimated Quantities if needed.	
9	Ensure quantity for Unclassified Excavation shown in Summary of Estimated Quantities matches total given in the project quantity folder. Quantity folder shows 1217 CY of excavation while the Summary of Estimated Quantities shows 1233 CY.	
10	Include pay item for Beveling of Pipe End on General Construction Note Sheet as an inclusion item.	
11	According to IB 2011-1, the pay items Bonded Fiber Matrix (BFM) and Fiber Reinforced Matrix (FRM) are no longer valid. Please update pay items accordingly.	

Comment No.	Comment	Response
12	Verify quantity for Temporary Erosion Control Blanket shown in Summary of Estimated Quantities. The quantity given in the Summary of Estimated Quantities appears high based on the size of the project.	
13	According to IB 2006-10, the pay items Replace/Repair Silt Fence and Removal of Silt Retained by Silt Fence are only required when the estimated quantity for silt fence exceeds 2000 LF.	
14	Include pay items for Right of Way Plat (8091050) and Right of Way Marker (Rebar and Cap) for all projects that require new right of way.	
15	Verify asphalt quantities given in Summary of Estimated Quantities. Unable to accurately determine asphalt quantities based on typical sections/plan sheets/cross sections.	
16	If the intersection of US21/S-159 will remain signalized, a design speed of 35 mph must be maintained through Princeton Rd. /Springsteen Rd. Typical section 3B and 3C indicate a 20 mph design on Springsteen Rd. from station 20+31.92 to 21+00. The sag vertical curve on Springsteen Rd. (with VPI station 20+55.00) does not meet the minimum required length based on a 35 mph design speed.	
17	Ensure maximum superelevation show on Reference Data Sheet is correct. Plans currently specify a maximum superelevation of 3.04% (sheet 5A). According to HDM Figure 11.3D, the interpolated maximum superelevation value is approximately 2.84%. Verify and revise plans if necessary.	
18	Superelevation development shown in cross sections for horizontal curve on Princeton Rd. does not appear to meet SCDOT standards. Verify superelevation development with HDM Chapter 11 and also ensure superelevation notes are accurate and plotted in the correct locations. Because cross slopes may vary in curb and gutter sections due to minor adjustments to top of curb elevations, designers may omit cross slopes on cross sections utilizing curb and gutter.	
19	HDM Figure 21.3D requires a minimum grade of 0.3% on curb and gutter sections for urban collectors. Profile sheet 9 shows a 0.29% grade within a section that is utilizing curb and gutter on the right side.	
20	Arterial routes require 12' travel lanes. Plan sheets indicate 11.9' travel lanes on US 21. Unsure if this is a labeling issue.	

Comment No.	Comment	Response
21	Urban arterials not utilizing curb and gutter require 10' shoulders (2' paved) (HDM Figure 21.3A). Urban collectors not utilizing curb and gutter require 8' shoulders (2' paved) (HDM Figure 21.3C). Typical sections for Princeton Rd. and Springsteen Rd. not utilizing curb and gutter do not have the required shoulder widths.	
22	Verify stopping sight distance for cars traveling through the intersection across US 21 (see profile sheets 8/9). The sight distance appears to be short due in part to the 4.55% longitudinal grade on Princeton road just beyond the tie-in.	
23	Dimension traveled way widths and medians on typical sections (see HDM Chapters 13 and 21).	
24	All typical sections, including those for S-487 and S-159, indicate a variable centerline dimension up to 31.5' (all shown as 31.5'). However, plan sheets only indicate a maximum centerline width of 19.5' for S-487 and S-159. Plans show US 21 as a 5 lane TWLTL while S-487 and S-159 are shown as a 3 lane TWLTL. Revise centerline dimensions shown on typical sections for S-487 and S-159.	
25	Include "NTS" on typical section sheet 3C if not to scale.	
26	Ensure all Standard Drawing numbers given on typical sections are accurate. The Standard Drawing numbers given for curb and gutter, sidewalk, etc. are not valid Standard Drawing numbers.	
27	All ditches should have a minimum 1' depth. Ensure the ditches shown in cross sections at station 64+00 RT (sheet X5) and 28+00 LT (sheet X16) meet the required minimum depths.	
28	Sidewalk cross slopes shown on typical sections should be labeled 50:1 MAX.	
29	The special ditch drawings on sheets 3B and 3C are a little misleading regarding the presence of sidewalk. Sidewalk along S-159 RT begins at station 24+51.16 according to typical sections (sheet 3B). The special ditch drawing on sheet 3B does not show sidewalk through station 26+50. Additionally, the special ditch drawing on sheet 3C seems to show sidewalk beginning at station 23+62.25. Recommend revising stationing for these special ditch drawings to correctly depict where sidewalk is located.	
30	Label the new 25x25 "Δ" on the Property Closure sheet (see plan sheet 8).	
31	The control points shown on the Reference Data Sheet (sheet 5A) appear to be mislabeled as Benchmarks (top-right box). Verify and revise if needed.	

Comment No.	Comment	Response
32	The curb grade profile data should be given on Reference Data Sheet in addition to the curb grade profiles shown on sheet 9A.	
33	Recommend showing utility owners on first plan sheet as outlined in HDM Section 34.2.7.3 and P.P.G. Page 4-2 (notes are currently shown on the Reference Data Sheet).	
34	Give stationing at the beginning and end of all tapers.	
35	Generally, type 18 catch basins are used at low points within curb and gutter. Plans show a type 16 catch basin (CB-1) used on S-159 (sheet 9) at station 21+42.58 LT. Verify and revise plans if needed.	
36	HDM Figure 15.2F recommends having a minimum of 10'from the mainline edge of travel way before beginning a vertical curve on side roads. Profiles for S-487 (sheet 8) and S-159 (sheet 9) begin vertical curves within this area.	
37	Tie-in grades given on side road profiles (sheets 8 and 9) should match the cross slope of the mainline given in cross sections (sheet X2).	
38	The beginning station given in the special ditch note shown on profile sheet 9 is incorrect based on typical sections. Revise from 23+62.15 to 23+62.25.	
39	The left curb elevations on S-159 shown in cross sections at stations 25+50 and 26+00 (sheet X14) do not agree with the left curb elevation profile (sheet 9A). Verify and revise plans where needed. The elevations given on the profile are actually the centerline elevations according to cross sections.	
40	Cross sections indicating a variable cross slope should be labeled as such on typical sections. There appear to be segments of roadway which are labeled 48:1 on typical sections but shown as variable in some locations in cross sections (see US 21). Cross slopes should be shown as 48:1 after transitioning from existing pavement if superelevation is not being developed. Verify and revise accordingly.	
41	Cross sections for Princeton Rd. show an 18" SWP in the ditch line at station 69+50 RT (sheet X8).	
42	Beginning with the August 2012 letting, plans must include labels for present and new right of way on the cross sections (IB 2012-1). Unable to verify letting date.	
43	Existing sidewalks not accurately shown at intersection of US-21 and Cypress Point Road. Bring curb ramps up to current standards, e.g. add detectable warnings.	
44	Project should be providing sidewalk throughout project limits in such a developing urban area.	

Comment No.	Comment	Response
45	Even if sidewalks not being added this project, triangular islands being added at intersection should have curb ramps (or flush pedestrian channels) detailed at this signalized intersection where pedestrians will be crossing. If signal work to be included in this work, consider pedestrian features.	
46	Please label all streets; i.e. US 21/ Anderson Rd is not labeled on sheet 9.	
47	Provide a curb ramp at sidewalk terminus.	
48	There is a legally implied crosswalk when two streets intersect. Please consider providing curb ramps at non-marked crosswalks such as where Cedarvilla Drive intersects Springsteen Rd, station 26+00 R.	
49	Please indicate curb ramps where intended; i.e., the corner of Cowan Farm Road and Springsteen Rd. When indicating a curb ramp provide a Standard Drawing reference.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC101 & S-113	**Rd./Rte. Name:**	SC101/Fews Bridge Rd./Fews Chapel Rd.	**File No.:**	23.037687A
County:	Greenville	**Project Description:**	SC101 & S-113 Intersection Improvement		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	3/12/12	**Reviewed By:**	RLK, BTN		

Comment No.	Comment	Response
1	Recommend showing project file number in PES.	
2	The design year ADT should be measured from the expected construction completion date (HDM Section 9.6.2.1). Revise traffic data on title sheet for a 20 year period beginning after construction.	
3	Recommend showing "Begin" and "End" project arrows or indicating the direction of stationing on title sheet location map (PPG Section 2).	
4	Include all applicable signatures and dates, including EOR on final construction plans.	
5	Verify quantity for 18"SW Pipe shown in Summary of Estimated Quantities is accurate based on plans/inclusions.	
6	Include pay items on General Construction Note Sheet as inclusions if not detailed in plans, i.e. sidewalk, pedestrian, etc.	
7	Include alternate pipe information in plans if required by the implementation schedule (IB 2009-4).	
8	According to PAM 8, the correct pay item number for Right of Way Marker (Rebar and Cap) is 8091000. The Summary of Estimated Quantities shows a pay item number of 8091010.	
9	The quantity for Straw or Hay Mulch with Tackifier given in the Summary of Estimated Quantities (3.3 AC) does not agree with the General Construction Note Sheet's inclusion items (3.282 AC). Also, the quantity for Temporary Erosion Control Blanket given in the Summary of Estimated Quantities (5.5 MSY) does not agree with the Erosion Control Data Sheet (5.425 MSY).	
10	The Summary of Estimated Quantities and General Construction Note Sheet do not agree regarding the quantity for Stabilized Construction Entrance.	
11	Reference EDM 53 to determine if rumble strips are needed on SC 101.	
12	Verify quantities for Geotextile for Erosion Control Under Rip Rap and Sediment Dam Rip Rap based on sediment dam information given on Erosion Control Data Sheet.	

Comment No.	Comment	Response
13	Determine if a POT station should be labeled near station 14+60 (plan sheet 6) due to the relocated centerline beginning within an existing curve.	
14	Recommend meeting minimum curve lengths based on HDM Figure 11.2E (see Fews Chapel Rd on sheet 5A).	
15	Recommend using "Δ" for deflection angles given on Reference Data Sheet as shown on Standard Drawing 100-105-00.	
16	The relocated PC at station 24+86.15 is mislabeled as a relocated PT (SC 101).	
17	Revise left turn lane width given on Fews Bridge Rd (sheet 8) to 11' as indicated on sheet 7.	
18	Typical sections should be approved by Pavement Design Engineer.	
19	Due to the intersection of SC101/S-113 becoming signalized, the superelevation developed on S-113 will be required to meet 35 mph. Recommend designing curve Fews Bridge Rd (PI station 12+79.79) with a longitudinal gradient of 0.62% as allowed by HDM Figure 11.3A to improve proper superelevation development at this location	
20	As presently designed, superelevation development for the reverse curves on SC 101 does not adhere to SCDOT standards and may compromise driver comfort. At (future) signalized intersections, transition the cross slope of the minor road to meet the profile and cross slope of the major road (HDM Section 15.2.7.2). Recommend designing SC 101 as major road (higher ADT) and transitioning S-113 to meet controls as the minor road. Cross sections show that full superelevation of SC 101 curve 2 can be achieved before station 25+00 at the intersection, eliminating the need to hold 1% through the intersection.	
21	According to curve data for curve SC 101 (with PI station 34+45.92), the PC should be located at station 31+91.49. Plans show a PC station of 32+91.49.	
22	According to plan sheet 6, it appears tract 14 needs erosion control permission. Verify and revise Right-of-Way Data Sheet if needed.	
23	According to plan sheet 7/8, it appears tract 9 needs slope permission. Verify and revise Right-of-Way Data Sheet if needed.	
24	Ensure Right of Way office is aware of locations requiring work be completed and where present right of way is unavailable. For example, the removal of existing pavement along Fews Bridge Rd. (sheet 8).	

Comment No.	Comment	Response
25	Recommend including relocation note on plan sheet 9. Also verify stations given in relocation note on plan sheet 10 are accurate based on plans.	
26	Verify sight distance can be obtained through the intersection on S-113 due to both legs approaching SC 101 with positive grades.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US 501 NB	**Rd./Rte. Name:**	Edward Burroughs Highway	**File No.:**	26.040271
County:	Horry	**Project Description:**	US 501 NB Turn Lanes		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10/25/12	**Reviewed By:**	RLK, JKL		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RLK	1	Verify latitude and longitude coordinates shown on title sheet. Based on the beginning and ending arrows labeled on the location map, the beginning coordinates should be greater than the ending coordinates. Revise accordingly.		
2	RLK	Various	Regarding US 501 SB, provide beginning and ending construction stations on plan, profile, and cross section sheets sheets as indicated on typical section sheet 3.		
3	RLK	Various	Provide necessary signatures and/or initials and dates on title sheet and typical section.		
4	RLK	Various	Refer to IB 2009-4 regarding the design and implementation of alternate pipe. Show alternate pipe information on plan sheets as well as the Drainage Data Table.		
5	RLK	2	Verify quantity for Hydraulic Erosion Control Product (HECP) – Type 2 shown in Summary of Estimated Quantities and revise if necessary.		
6	RLK	Various	The desirable minimum grade for urban arterials is 0.5% (HDM Figure 21.3B). Grades on US 501 fall below this desirable value. Ensure additional drainage that will be created due to the widened footprint is accommodated properly by the shoulders and/or median.		
7	RLK	15	The tapered-offset left turn lane width at US 501/S-1224 is mislabeled as 12'. It should be labeled 14' as shown on sheet 7.		
8	RLK	Various	Give stationing at beginning and end of all tapers for left-turn auxiliary lanes.		
9	JKL	8	A minimum of 300' lane transition taper length is recommended at station 196+00 (sheet 8) of US 501 NB.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 160 at US 21	**Rd./Rte. Name:**	SC 160 at US 21			**File No.:**	46.040020
County:	York	**Project Description:**	SC 160/US 21 Intersection Improvement				
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:**	[redacted]	**Consultant:**	[redacted]
Review Completion Date:	2/7/2012	**Reviewed By:**	AH, BTN				

Comment No.	Comment	Response
1	The Plans submitted were never signed by Preconstruction Support – Road for Right of Way.	
2	The Hydraulic Design Reference Label should be added to the Construction Title Sheet.	
3	The index of sheets references a total of 30 sheets but the plans only include 26.	
4	At free-flowing legs and at all legs of a signalized or proposed future signalized intersection, the design speed of the road (35 mph) should be used to design all vertical curves (HDM Section 15.2.7.3). The vertical curve with VPI 36+15 do not meet the required length based on 35 mph. Also, the VPT of the last vertical curve should be located a minimum of 10 feet from the major road edge of traveled way. Additionally, vertical alignments through intersections should be as flat as practical (HDM Section 15.2.7.1).	
5	Include applicable standard drawing numbers on typical section sheet (curb and gutter, etc.).	
6	Urban arterials require10' shoulders (2' paved) or curb and gutter. Typical sections show variable widths in some locations. Verify shoulders meet required width per HDM.	
7	Ensure guardrail application will not be needed at certain locations along SC 160 due to side slopes (near station 24+00) based on HDM Figure 14.4A.	
8	The quantities for 15", 18", and 24" Smooth Wall Pipe as shown on the Summary of Estimated Quantities does not match what is shown in the plans. Ensure that the quantities shown on the General Construction Note are included in the total shown on the Summary of Estimated Quantities.	

9	The following quantities do not match what is shown in the plans. Verify and adjust accordingly: • Turf Reinforcement Matting (TRM) Type 1 • Agricultural Granular Lime • Selective Watering • Aggregate No. 5 for Erosion Control (6" Uniform) • Inlet Structure Filter – Type D1	
10	The quantity for Hot Mix Asphalt Base Course – Type A appears low. Verify quantity and adjust accordingly.	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	US 17 Business	**Rd./Rte. Name:**	Glenns Bay Road	**File No.:**	26.039305
County:	Horry	**Project Description:**	Intersection Improvement at S-1240		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	4/10/12	**Reviewed By:**	KS		

Comment No.	Comment	Response
1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
2	Pavement Design should be approved by Pavement Design Engineer.	
3	Based on classification of Urban Arterial, roadway needs a total shoulder width of10' with 2' paved. Refer to SCDOT Highway Design Manual Chapter 21 Section 21.3	
4	Missing Reference Data Sheet with Control Points and Benchmarks.	
5	Existing Right of Way is not labeled correctly on plan sheets; needs to include distance from center line, year project was constructed, and initials of the designer that verified R/W. Refer to Instructional Bulletin 97-8.	
6	Missing Utility Information on Plan Sheet.	
7	Missing Quantity in PES for Item No. 6250012 and 6250030	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-62	**Rd./Rte. Name:**	East College Street	**File No.:**	31.041306
County:	Lee	**Project Description:**	Intersection Improvements at U.S. Rte. 15 and Road S-111		
Type of Submittal:	Construction & R./W.	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1/10/2013	**Reviewed By:**	CWB, TD		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	CWB	1	The Geotechnical plan sheet was not submitted for the QA Construction and R. /W. review. Add Geotechnical Plan sheet G1.		1
2	CWB	1	RPG initials and dates are needed for Hydrology, Geotechnical and the Design Manager and Program Manager. See SCDOT review box on title sheet.		1
3	CWB	1	Initials and dates for Preconstruction Support - Road are needed. See SCDOT review box on title sheet.		1
4	CWB	1	Add signature and date for Right of Way Acquisition. See title sheet.		1
5	CWB	1	Add signature and date for Engineer of Record. See title sheet.		1
6	CWB	1	Geotechnical is misspelled in the Index of Sheets. Correct.		
7	CWB	2,3 and 5	Hot Mix Surface Course Type-B is not compatible with Hot Mix Intermediate Course Type-C and Hot Mix Asphalt Base Course Type-B. See latest guidelines for Hot Mix Asphalt Selection for guidance.		1
8	CWB	3	For the recommended application rate of #/SY. See the latest Guidelines for Hot Mix Asphalt Selection for guidance.		1
9	TD	3	Label sidewalk cross slope as 50:1 MAX.		1
10	TD	6	Ramp for pedestrians southbound on US-15 crossing the approach of West College Street from the west must be brought into compliance.		1

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

11	TD	6	Suggest moving location of pedestrian curb ramp on the SE corner farther around the radius and closer to the centerline of East College Street. As it stands it, since this is the only ramp available to US-15 pedestrian traffic to cross East College Street, it violates PROWAG R303.3.6 (Clear Space) by failing to provide a 4 x 4 foot area outside of conflicting vehicle travel lanes.		1
12	TD	6	Determine if a radius smaller than 65 feet will satisfy the requirements of this project. Such large corner radii in this neighborhood context introduce undesirable higher speed turning maneuvers for cars and smaller trucks degrading pedestrian safety. S-62 is only an Urban-Local classification.		1
13	CWB	7	Add link ID node to drop inlet and catch basin note.		1

Consultant Intersection Improvement

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US76/378, SC441, S467, US76/521, S276, US15, US521	**Rd./Rte. Name:**	Broad St, Patriot Pkwy/Peach Orchard Rd, Carter Rd, Gion St, Pocalla Rd, Guignard Dr	**File No.:**	43.041473, 43.041477, 43.041478, 43.041479
County:	Sumter	**Project Description:**	Spot Safety Intersection Improvements 2A, 2B, 2C, & 2D		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10/3/2012	**Reviewed By:**	CWB, BTN		

Comment No.	Comment	Response
	Comments not addressed from the Previous QA Preliminary Right of Way Review.	
1	Revise total mileage shown for net length of roadway. The net length of roadway should not be larger than the gross length of roadway. See sheet 1.	
2	The traffic data design year is still shown as 2013 for US15 (Pocalla Rd) and US 521(Guignard Dr) please revise to 2014. See sheet 1.	
3	The right turn movement from Swampfox Run onto S Giugnard Drive for the WB-67 is encroaching into oncoming traffic. Consider a wider throat design to accommodate this movement. See sheet 9.	
4	Erosion Control Data sheet is omitted please add.	
	Comments for QA Right of Way Review	
1	Ensure all begin and end stations shown on the following sheets agree throughout the plans. See sheets 3F, 6, 7, 8, 9, 9A, X15, X18, X27, X31 and 10.	
2	Pavement design needs to be signed by the Pavement Design Engineer.	
3	Ensure all typical sections show the design speed and stations notes in the Design Speed box. See sheet 3D.	
4	Replace (from station existing and to station existing) with the actual stations in the design speed box shown on typical sections. See typical section sheets 3, 3A, 3C, 3E, 3F, 3G, and 3I.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 90 & S-1347	**Rd./Rte. Name:**	St. Joseph's Road	**File No.:**	26.041428
County:	Horry	**Project Description:**	SC 90/S-1347 Intersection Improvement		
Type of Submittal:	RW	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	1/8/13	**Reviewed By:**	RLK, BN		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RLK	1	Complete Environmental Permit Information box.		
2	RLK	1	Recommend correctly labeling (sheet numbers) and placing drainage and erosion control sheets per Highway Design Manual (HDM) Figure 34.1B.		
3	RLK	1	Show mileage in thousandths within the project mileage summary table (3 decimal places).		
4	RLK	5A	Based on HDM Figure 11.2E, the recommended curve length for Curve SC90-1 is not met. Verify and revise if needed.		
5	RLK	3	Provide road group number on typical section for St. Joseph's Road, if applicable (HDM Section 22.1.2).		
6	RLK	3	Final typical section will need to be approved by Pavement Design Engineer.		
7	RLK	5A	Include all applicable information on Reference Data Sheet (HDM Section 34.2.6.3).		
8	RLK	6-8	Typically, paved shoulders are not shown on SCDOT plan sheets.		
9	BN	1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.		
10	BN	3, 6, 7	Recommend using a 15 feet wide median to properly develop the left-turn lane on SC 90, 11 feet for turn lane and 4 feet median as a safety buffer to adjacent traffic for safety.		
11	BN	6-8	Driveways that fall within the functional area of the intersection must be addressed. Recommend coordination with the District Traffic Engineer to determine if any of the driveways can be close or design as right-in right-out.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

5	In reference to the typical sections, if the design speed is greater than 45 mph then curb and gutter adjacent to high speed roadways should not be located closer to the traveled way than the outer edge of the shoulder. Recommend lowering the design speed to 45 mph. Refer to SCDOT Highway Design Manual Section 21.2.9.	
6	The superelevation transition length for curve C-1 S-467 (Carter Rd) does not agree with the 0.70% longitudinal gradient shown in the curve data. See cross section stations 11+99.57 through 13+41.81. See sheets 5D, X6, and X7. See HDM Figure 11.3A for guidance.	
7	Show the eMax, e, Design Speed, PC-LG%, and PT-LG% as N./A. for Curve SG-3 on S. Giugnard Drive, Curves S-1and S-2 on Swampfox Run . See sheet 5H. See HDM Section 15.2.4 for guidance. See IB 99-01 for guidance on T-Intersections.	
8	In reference to the turning movement plan sheets, there are several areas shown the wheels path that encroached onto the shoulder and opposite travel line. Verify and revise accordingly.	
9	Show the beginning and end stations for all alignments at each intersection location on title sheet. See sheets 6, 7, 8, 9and 10.	
10	Show Right of Way on plans. See sheets 7, 9, and 10. See IB 2012-2 for guidance.	
11	Show bearings on centerline tangents. See sheet 6. See SCHDM Section 34.2.7.17 for guidance.	
12	Do not show 2' paved shoulder on plan sheets. See sheets 9, and 10.	
13	Show PC station 23+90.02 on US 76/378 (Broad St.). See sheet 7.	
14	Add estimated excavation for entrances or drives if needed. See sheet 7.	
15	Profile elevations for Swampfox Run are not in agreement with cross sections. See sheets 9B, and X35.	
16	Add earthwork balance points on S-467 (Carter Road) sheet 7A, Driveway 1 sheet 7A, Swampfox Run sheet 9B, and South Guignard Dr. sheet 9B. See attached file for an example of earthwork balance points.	
17	Show top of curb grade elevations for US 76/378 (Broad Street) and Mall Entrance @ US 76/521 (Broad St.) on cross sections. See sheets X12, X13, and X14.	
18	Show volumes for earthwork on cross sections.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US76/378, SC441, S467, US76/521, S276, US15, US521	**Rd./Rte. Name:**	Broad St, Patriot Pkwy/Peach Orchard Rd, Carter Rd, Gion St, Pocalla Rd, Guignard Dr	**File No.:**	43.041473, 43.041477, 43.041478, 43.041479
County:	Sumter	**Project Description:**	Spot Safety Intersection Improvements 2A, 2B, 2C, & 2D		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	5/25/12	**Reviewed By:**	CWB, JL,TD		

Comment No.	Comment	Response
1	Mileage shown for Pocalla Rd. is not in agreement with the typical section. See sheets 1, 3E, and 3F.	
2	Net mileage and gross mileage or reversed. Net mileage should only include the gross mileage minus the exceptions to project and bridges if work to bridges is being omitted from the project. See sheet 1.	
3	Show file and project number for each location on Title sheet. See sheet 1.	
4	Add PCN Numbers above the Project Identification Box. See title sheet.	
5	Show Beginning and Ending Station Notes on the title sheet for each location. The notes must agree with the Typical Sections, Plans and Cross Sections. See PPG for guidance.	
6	Add NPDES Disturbed Area in Acres to title sheet. See HDM for guidance.	
7	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
8	Pavement Design needs to be approved by the Pavement Design Engineer. See typical sections.	
9	If the design speed is greater than 45 mph then curb and gutter adjacent to high speed roadways should be of the sloping type curb and should not be located closer to the traveled way than the outer edge of the shoulder. Refer to SCDOT Highway Design Manual Section 21.2.9.	
10	Revise the Horizontal Design speed for S-467 (Carter Rd) from 40 mph to 25 mph. The 0.030 eMax rate of superelevation for Curve C-1 shown on cross sections only meets a 25 mph Design Speed. See sheet 3A and X6.	
11	Add note for Graded Aggregate Base not to be used on areas with 6 foot or less width to typical sections.	

Comment No.	Comment	Response
12	Note lowest design speed for S-467 and Swampfox Run in the design speed block on typical section.	
13	The left shoulder of the typical for Swampfox Run does not show 50:1 as shown on cross sections. Typical and cross sections should agree. See sheets 3A, 3G and cross sections.	
14	Recommended rate for Surface Type B is 200 #/SY. See latest Guidelines for Hot Mix Asphalt Selection for guidance. See all typical sections in plans.	
15	Recommended rate for Intermediate B is between 250-300 #/SY. See latest Guidelines for Hot Mix Asphalt Selection for guidance. See all typical sections in plans.	
16	Not to be used when width is less than 6 feet. Add note to typical sections. See all typical sections in plans.	
17	Add slope permission for tract no. 414 on sheet 4A.	
18	Show obtain and remain for tract no. 202. The property owner is Tuomey SC Non-Profit Corporation. See sheet 4 and 4D.	
19	Design speed for curves S-1 and S-2 on Swampfox Run needs to be changed to N/A. Because of the proximity of the intersection. See sheets 5B, and 9. See IB 99-1 for guidance.	
20	Superelevation runout for S-467 is not in agreement with the longitudinal gradient. See sheet 5B and X6.	
21	Use latest General Construction Note. See sheet 5. See attachment.	
22	Show the correct eMax, e, PC and PT Longitudinal Gradient with all curves as necessary. See HDM for guidance.	
23	Include datum with benchmark information on plans.	
24	Add curb grade profile data to reference data sheets.	
25	Show retain existing for the eMax, e, PC and PT longitudinal gradient, in all curve data were the pavement is being retained. See IB 2003-11 for guidance.	
26	Add station offsets to plans.	
27	Add estimated excavation for entrance on sheet 9 if needed.	
28	Add NPDES lines to project were necessary. See sheet 9. See HDM Chapter 30 for guidance.	
29	Show station offsets for Transitional Right of Way at the intersection of US 15 (Pocalla Rd NB) and Swampfox Run. See sheet 9.	

30	Sheet 8—at the very least, we will need to provide the median crossing (at the shopping center entrance) with ADA features (correct cross slopes, minimum width, detectable warnings, etc.). Are these details being accounted for? Generally, per SCDOT ADA Transition Plan, within the project limits, if the appropriate bid items are included (and sidewalk is), the sidewalk curb ramps which are missing, or existing but not up to current standards, must be addressed.	
31	Sheet 8, 9 and 10—in several places, Pocalla Road is referred to as "US-51;" it should be US-15.	
32	Based on a design speed of 50 mph and a travel lane width of 12 feet, the taper should be 180 feet (sheet 8). Refer to SCDOT Highway Design Manual Figure 15.5H.	
33	Verify the design vehicle can make all appropriate turn movements at all legs of the US 51/Swamp Fox Run Intersection (sheet 9) and US 521/S Guignard Drive (sheet 10) with turning templates.	
34	Add begin and end stations to cross sections for special ditch notes if over 300 feet. See profile and cross section sheet.	
35	Show existing and finished grade elevations on profile and cross sections for S-467 Carter Rd. See sheet 7A, X5-X10.	
36	Add elevations to profile for Drive number 1.	
37	Show VPC and VPT stations with elevations on Swampfox Run, and South Guignard Dr. review all vertical curves. See sheet 9B and all other profile sheets.	
38	The vertical curves should be consistent with the design speed shown on the typical section (sheet 9B) for South Guignard Drive.	
39	Add Erosion Control Data sheet if NPDES is over 1.0 Acre	
40	Show present and new right of way on cross sections.	
41	Cross sections are not in agreement with typical section for Swampfox Run. Cross sections show a 50:1 slope. Revise so typical section and cross sections agree. See sheets 3G and X13.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 7 & SC 61	**Rd./Rte. Name:**	Same Rittenberg Blvd. & Ashley River Rd.	**File No.:**	10.037466A
County:	Charleston	**Project Description:**	SC 7 & SC 61 Intersection Improvement		
Type of Submittal:	Final R/W	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	6/21/12	**Reviewed By:**	RLK, JKL, JPT		

Comment No.	Comment	Response
1	Revise title sheet to match IB 2011-5. This sheet includes EOR seal and signature, Approval for Right of Way Acquisition box, SCDOT signature boxes, etc.	
2	The roadway exception noted on title sheet for SC 7 should also be indicated on typical section sheet 3C.	
3	Note the "begin construction" station on profile for SC 61 at station 96+73.00 (sheet 12) to be consistent. A note for "end construction" is given at the end when only the sidewalk is being constructed (see sheet 15).	
4	Verify gross length of project for SC7 based on stations given on title sheet.	
5	Urban arterials require a 10' shoulder (2' paved) when not utilizing curb and gutter (HDM Figure 21.3A). Typical section sheet 3B details a portion of SC 7 LT only having a 6' shoulder before the edge of sidewalk. This will place pedestrians within the shoulder of SC 7 LT. Revise typical section and plans to meet required shoulder widths within this section. Keep sidewalk outside of required shoulder or design curb and gutter to extend fully to the driveway.	
6	All vertical grade changes (excluding tie-in locations) require a vertical curve.	
7	Ensure the cross slope transitions at the intersection of SC 7 and SC 61 have been designed as practical as possible and follow HDM Section 15.2.7.2. Generally, the crossroad (SC 7 presumable as it has a lower ADT) is transitioned to meet the profile and cross slope of the mainline. See sheets X6-X7 and X13-X14.	
8	Asphalt materials shown on typical sections should comply with the latest version of the Hot Mix Asphalt Selection Guidelines.	
9	Verify pavement depths shown on typical sections and ensure cross sections accurately depict this depth. Cross sections appear to show thicker depths than needed in some locations.	
10	Include benchmarks on Reference Data Sheet (HDM Section 34.2.6.3).	

Comment No.	Comment	Response
11	Label triangular areas as shown in PPG Page 12-9. Verify intersection sight distance at all locations and ensure the new transitional right-of-ways (triangular areas) will be adequate especially where Wappoo Rd intersects SC 61 on the inside of the horizontal curve (sheet 9).	
12	A minimum of 150 feet storage should be used for left turn lanes for urban areas and 200 for rural areas. Refer to SCDOT Highway Design Manual Figure 15.5J.	
13	Verify the dual left turn lanes can accommodate a WB-62 and SU vehicle turning simultaneously without encroaching into adjacent or opposing lanes.	
14	Sheet 6 —Provide 4'-0" landings at the top of perpendicular ramps. If this is not achievable, consider parallel ramps in lieu of the perpendicular shown.	
15	Where pedestrian ramps and driveway aprons are indicated, consider noting the applicable SCDOT Standard Drawing.	
16	Curb ramps are graphically indicated at some intersections but not all. Please indicated curb ramps at all intersections and radius return driveways.	
17	Detectable warnings — consider noting the applicable Standard Drawing. Note locations.	

SCDOT Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 183 @ SC 8	**Rd./Rte. Name:**	SC 183 @ SC 8 (Jewell) @ Blue Flame/Jones	**File No.:**	39.037727A
County:	Pickens	**Project Description:**	Intersection Improvements		
Type of Submittal:	Construction	**Submitted By:**	[redacted] **RPG:** [redacted]	**Consultant:**	[redacted]
Review Completion Date:	4/25/2012	**Reviewed By:**	AH, BN, JL, TD		

Comment No.	Comment	Response
1	Comments concerning the superelevation along Jewell Street East and West are being withheld pending the outcome of the requested design exception.	
2	Correct the year for S-23 (East Jones Ave.) that shown on the Traffic Data sheet 1A.	
3	Plans show the use of RC Pipe in the Summary of Estimated Quantities. Current standard is the use of Smooth Wall Pipe. Reference IB 2009-4.	
4	Verify Pipe Quantities shown in plans. Pipe quantities shown in plans do not match what is shown on the Summary of Estimated Quantities. Also, verify that all pipe needed for each bid alternate has been accounted for. Some quantities are not shown in alternate bids.	
5	Reference SCDOT Instructional Bulletin 2011-1 for the seeding design. For example, mowing should be twice the sum of temporary and permanent cover. Adjust accordingly.	
6	Pavement quantities shown in the plans do not match what is shown on the Summary of Estimated Quantities. Based on plans as submitted, only a rough estimate of these quantities could be figured in a timely manner. Verify quantities and adjust if necessary.	
7	Ensure all plan sheets are signed and sealed for final construction. Ensure the pavement design has been approved by the appropriate SCDOT personnel.	
8	Present Right of Way should be verified and shown with distance from the centerline, the file number, the year it was constructed, and the initials of the person who does the verification throughout the plans.	
9	PC's and PT's for each curve should be shown on the plan sheets.	
10	Comments concerning the superelevation along Jewell Street East and West are being withheld pending the outcome of the requested design exception.	

11	Ensure the superelevation rates are based on the SCDOT HDM Chapter 11, which is based upon the 2001 Green Book. Several curves specify superelevation rates that are not consistent with the SCDOT Highway Design Manual.	
12	Superelevation notes shown in the cross sections should read, "Begin Superelevation, Begin Max Superelevation, End Max Superelevation, and End Superelevation."	
13	Re-verify that adequate throat widths, tapers, and corner radii have been designed to accommodate the S-BUS without encroachment into adjacent lanes at the intersections of Jewell St. East Const. /Woodrow St. (Reloc.) and Woodrow St. (Reloc.)/Schoolhouse St. Relocate (sheet 10). Reference SCDOT Highway Design Manual Section 15.3 for guidance.	
14	In accordance with the SCDOT Highway Design Manual section 15.2.5 the WB-62 design vehicle is to be utilized at the intersections of Jewell St. East Const. /SC 183 (Farrs Bridge Rd.) Rel. (sheet 11) and should also be at East Jones Ave. (S-23) Const. /Plant Entrance Drive (sheet 14). Re-verify that adequate throat widths, tapers, and corner radii have been designed to accommodate the WB-62 at these intersections.	
15	Earthwork balance points should be shown on the Profile Sheets. Cannot verify Earthwork quantities per plans as submitted.	
16	Evaluate placement of a raised concrete median on S-23 near the intersection of SC 8/183. A raised concrete median by help control undesirable traffic operations since the driveway for tract 4 is in close proximity to the intersection.	
17	The horizontal offset along SC 8/183 at the intersection of S-23 does not adhere to SCDOT guidelines. Reference Figure 15.2E in the SCDOT HDM.	
18	The vertical alignment for Hilrose Lane Relocation should be reevaluated. The extreme grade change between the Hilrose Lane Relocation and SC 183 may cause vehicles to bottom out. Reference Figure 3-4 in the SCDOT ARMS manual.	
19	Extend sidewalk and curb through corner radii when not tying into existing curb and sidewalk.	
20	Driveways that fall within the functional area of intersections must be addressed. Recommend coordination with the District Traffic Engineer to determine if any of the driveways can be close or design as a right-in right-out.	
21	Recommend utilizing road closure barricade at Schoolhouse Street existing to be consistent with closure at Planer Street.	

22	Ensure Sidewalk on Planer Street and Schoolhouse Street Existing tie into the logical points. Sidewalk should not terminate into the roadway.	
23	Sheet 6—"Hamption" Avenue is misspelled. At STA 5+50LT, existing conc. Drive—insure that a 4-foot wide, 2%MAX. cross slope pedestrian accessible element is carried across this driveway as it is reconstructed.	
24	At the intersection of East Jones Avenue and Jewell Street East and West, there should be two curb ramps on each corner (to aid the blind and vision impaired in way finding—See PROWAG Advisory R303.1 General.).	
25	Sheet 11—Recommend adding sidewalk along SC 183 between Jewell Street East and Hilrose Lane. This can be accomplished best by utilizing curb and gutter.	
26	Sheet 10 - Recommend adding sidewalk along SC 183 along Jewell Street East, Woodrow Street Relocation and Schoolhouse Street Relocation. This can be accomplished best by utilizing curb and gutter.	

In-House
Roadway Widening

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-136	**Rd./Rte. Name:**	Henry Brown Jr. Blvd.	**File No.:**	08.039389
County:	Berkeley	**Project Description:**	S-136 Widening Phase 1		
Type of Submittal:	Right-of-way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	10/5/12	**Reviewed By:**	RLK, BN, TD		

Comment No.	Comment	Response
	Roadway Design Comments:	
1	Recommend placing the Utility sheets after the Erosion Control Data Sheet per HDM Figure 34.1B and revising index of sheets accordingly.	
2	Complete all information on title sheet (NPDES area, Environmental permit information and railroad involvement).	
3	Typically, the traffic data range is 20 years (HDM Figure 9.6A). Revise traffic data information on title sheet accordingly.	
4	Verify mileage for side roads on title sheet per typical sections. Revise if needed.	
5	ITMS lists S-136 (north of S-29) as an urban collector. Typical sections show S-136 to be an urban arterial. Ensure functional classification shown on each typical section is accurate and revise where needed.	
6	Refer to HDM Section 11.2.5 regarding minimum length of curves. Curve data shows several curves not meeting the lengths recommended in Figure 11.2E.	
7	Recommend revising superelevation rate for curve 5 from 0.047 to 0.048 (sheet 5A) due to rounding.	
8	A complete review of design criteria could not be provided for side roads whose design speed was not given in plans. Recommend placing a design speed on typical section for all side roads.	
9	The desirable minimum grade for urban arterials and/or collectors is 0.5% (HDM Figure 21.3B and 21.3D). Several locations fall below 0.5% according to profile sheets (sheets 8A, 11A, 25, and 26). Verify and revise plans if needed.	
10	Provide superelevation notes in cross sections for curve 4 (sheets X81-X86).	

Comment No.	Comment	Response
11	SCDOT uses compound curves on a highway mainline only to maintain a desired alignment or to meet field conditions (e.g., to avoid obstructions which cannot be relocated) HDM Section 11.2.2.3. Plans show a compound curve being used at the end of the project (sheet 13). Determine if it would be practical to use a simple curve in this location.	
12	According to the Hot Mix Asphalt Selection Guidelines, the pavement design detailed for S-136 (sheets 3 and 3A) is for routes with less than 10,000 ADT. Verify pavement design is appropriate for each roadway and have them approved.	
13	Label finished grade on sheets 3, 3A, 3B and 3D.	
14	Place variable ditch note on sheet 3.	
15	Place applicable SCDOT Standard Drawings numbers on all typical section sheets.	
16	Provide slope permission on Right-of-Way Data Sheet for tract 62 (sheet 8) if needed.	
17	Provide erosion control permission on Right-of-Way Data Sheet for tract 98 (sheet 8) if needed.	
18	Provide vertical curve data for curbs on Reference Data Sheet (HDM Section 34.2.6.3).	
19	The new 100' right-of-way is mislabeled as new 87' right-of-way near station 114+00 LT on property layout (sheet 4L). Refer to sheet 12 for the correct right-of-way label. Ensure all right-of-way is labeled correctly.	
20	Several plan sheets are missing and/or out of order. Sheets 6, 14, and 15 appear to be missing. Sheets 32 and 33 are out of order.	
21	Label all new right-of-way on plan sheets. There a several segments of right-of-way not labeled. See new 82' right-of-way (sheet 9, station 73+00 LT), new 100' right-of-way (sheet 11, station 98+00 LT), transitional new right-of-way (sheet 12, station 107+50 LT), new 80' right-of-way (sheet 26, station 17+00 LT). Ensure all right-of-way is labeled on plan sheets.	
22	Recommend using symbology for painted median as shown on SCDOT Standard Drawing 100-105-00.	
23	Refer to HDM Figure 15.5H regarding auxiliary lane taper lengths. The reverse radius on sheet 13 does not meet the required length for 45 mph as indicated on typical sections.	
24	Label lane widths at tie-ins to existing pavement. Also provide lane widths on sheet 27.	
25	Recommend placing match lines on plan sheets.	

Comment No.	Comment	Response
26	Provide plus stationing at beginning and end of all straight tapers.	
27	Plan/profile sheet 19 indicates gaps in the S-585 profile that may need to be considered as exceptions. Verify and include exceptions where needed.	
28	HDM Figure 15.2 G recommends a maximum total sag break of 3% for side roads tying into a superelevated mainline. Sheet 20 details a sag break of approximately 4.2% (see cross section sheet X18). Also see sheet 25 at the intersection of S-136 and S-529 (cross section sheet X78).	
29	Include a 10' buffer before introducing a vertical curve on side roads (HDM Figure 15.2F). See sheets 25 and 28.	
30	Include profile for S-29 in plans.	
31	Refer to HDM Figure 14.4A regarding barrier warrants. Several locations shown in cross sections need consideration. See sheet X8, X33, X37, X57, X66, X68, etc. Ensure all warranted slopes are protected by guardrail or another type of barrier.	
32	Label all fill slopes in cross sections. See sheet X14, X55, etc.	
33	Based on cross sections, the pavement depth between stations 125+50 and 126+00 appears to increase (see sheet X81). The pavement design given on typical sections for S-136 is constant throughout. Verify pavement depth and revise if needed. Also verify pavement depth for Liberty Hall (sheets X106 – X119).	
34	Several of the final elevations for S-585 shown in cross sections (sheets X95-X98) are missing or do not match the centerline elevations shown on profile sheet 19. Verify elevations and revise where needed.	
35	Revise the centerline elevations shown on sheet X1 to match those shown on profile sheet 6A (S-136).	
	Geometric Design Comments:	
36	In reference to typical section on S-29 (sheet 3B), pavement beyond the second lane from the crown should have a cross slope of 36:1 (2.78%). See SCDOT Highway Design Manual section 13.2.3.3 for guidance.	
37	The superelevation rate for ROAD S136B-6 is incorrect (sheet 5A). It should be e≈5.31%. The cross sections also needed to be correct. See SCDOT Highway Design Manual Figure 11.3C.	
38	Label beginning and ending tapers in plan sheets where omitted.	
39	The taper for the right turn lane near Station 126+50 (sheet 13) should be a minimum of 180 feet based on design speed of 45 mph. Refer to SCDOT Highway Design Manual Figure 15.5H.	

Comment No.	Comment	Response
	Bike/Ped Comments:	
40	Sheets 3 & 3A—Label "multi-use path" as "shared use path" here and throughout the plans as this is the AASHTO standard term. Label sidewalk cross slope as 50:1 MAX. A 2-foot shoulder is shown to the left of the shared use path before the grade break to the ditch—label slope as 6:1 MAX or flatter.	
41	Sheet 3B—Label sidewalk cross slope as 50:1 MAX. Improvements to Red Bank Road are providing no measures for bicyclists along 0.2 miles yet it appears as "Recommended Trails and Bike Lanes" in the CHATS Bicycle and Pedestrian Plan.	
42	Sheet 3C—Consider adding sidewalk, or at least grading to allow sidewalk in future.	
43	Sheet 3D—Is the sidewalk mislabeled as "Multi-use Path" or is the so-called "Multi-Use Path" too narrow at 5-feet when 10-feet is needed? If it is indeed to be widened and made a 'Shared Use Path" apply the comments for Sheets 3 and 3A.	
44	Sheet 7—Recommend sidewalk between STA 38+10 RT and STA 44+00RT (the driveway to a local business). This is the area where curb and gutter are already to be placed.	
45	Sheet 10—at intersection with Kenilworth, the shared use path approaches to this side street do not align with one another, and it appears that the median island of the side street has not been cut back enough so as not to block the pathway. Preferable would be a redesign that allowed pedestrian and bicyclist refuge by means of a cut-through in the island. Suggest retaining the pathway offset as the survey approaches this point and allowing the pathway to move closer to the roadway after this intersection if necessary.	
46	Sheet 11—Typical Section for S-136 (sheet 3) depicts the edge of the shared use path as being a consistent 8.0 feet (10.00 –2.00 feet) off the edge of pavement. Yet on sheet 11, at the intersection with Burnt Mill Road, where there is no right turn lane, the pathway clearly intersects this side road much closer to the centerline of Henry Brown from the south than it does from the north.	
47	Sheet 13—curb ramps cannot be found being placed at this intersection to access the new sidewalk being built along S-529, Liberty Hall Road, nor the shared use path along Henry Brown.	

Comment No.	Comment	Response
48	Project limits extend approximately 0.2 mile along Red Bank Road which is curb and gutter. It is an Urban Principal Arterial with and AADT of 25000 vpd. It should be getting sidewalks on both sides throughout the project limits. Confirm that provisions are consistent with CHATS Bicycle and Pedestrian Plan.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US 25/SC 121	**Rd./Rte. Name:**		**File No.:**	19.036773A
County:	Edgefield	**Project Description:**	Widening		
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	11/16/12	**Reviewed By:**	KS, BN, JL		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	KS	Title Sheet	Longitude and Latitude given do not appear to match the project boundaries.	Will revise	
2	BN	Title Sheet	Hydraulic Design Reference should be 2009. Verify and revise accordingly.	Will revise	
3	KS	4	Put all Tract Numbers with Right of Way information on Right of Way data sheet.	All affected tracts are on r/w data sheet	
4	KS	9	Label beginning and end of Tapers.	Will revise	
5	KS	9	Missing Present Right of Way verification on Plan Sheets. See Instructional Bulletin 2012-2 for guidance.	Will revise	
6	BN	6	Provide adequate transitional taper lengths for lane drop and lane shift tapers near station 371+00 per the design speed (60 mph) as shown on typical sections. See SCDOT Highway Design Manual Figures 21.2D and 15.5K for guidance.	Adjusted taper based on conversations with Steve and Binh.	

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	S-29	**Rd./Rte. Name:**	S. Cashua Drive	**File No.:**	21.215B
County:	Florence	**Project Description:**			
Type of Submittal:	Right of Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	9/11/12	**Reviewed By:**	KS, JT		

Comment No.	Comment	Response
1	Ending Station for S-903 LT Third Loop Road should be labeled as 11+90.00 on Sheet 7 instead of 10+90.00	
2	Ending Station for S-508 S. Santiago Drive should be labeled as 10+80.00 on Sheet 7 instead of 10+80.00	
3	Beginning Station for S-588 W McCown Drive does not match between Typical Section and Plan Sheet.	
4	Typical Section and Cross Sections calls South Knollwood Drive as S-103, however Plan and Profile Sheets label this road as S-1491. ITMS also shows this road as S-1491.	
5	Mileage on Title Sheet for Sideroads appears incorrect. Review and revise accordingly.	
6	Missing Design Speed on Typical Section for Side Roads	
7	Missing label for slope of shoulders on Sheet No. 3B.	
8	Curve 2 (S-29 REL) does not transition into Superelevation properly. Recommend extending construction of project to include Superelevation transitioning.	
9	Missing Benchmarks on Reference Data Sheet.	
10	Where Plats have been used as a reference to verify RW, the Book number and Page number should be shown on Plan Sheets. See Instructional Bulletin No. 2012-2 for guidance.	
11	Intersection of Willow Trace at S-29 does not meet Intersection Sight Distance.	
12	Intersection of Westchester Drive at S-29 does not meet Intersection Sight Distance	
13	Present Right of Way line does not use the correct symbology on Sheet No. 11.	
14	The vertical curves at West McCown Drive, Third Loop Road, West Chester and Willow Trace do not meet for 20 mph DS at the respective T-Intersections.	
15	Recommend coordinating with Traffic Engineering for why left turn lanes are not located at all intersections.	
16	The turn lanes for the side roads do not appear to meet the minimum	

Comment No.	Comment	Response
	storage lengths for left turn lanes as outlined in SCDOT HDM Figure 15.5J.	
17	The 18 feet throat widths along Celebration Blvd. should be looked into as well as throat width for right turn onto S-991. The receiving throat widths on S-29 from S-991 and Celebration Blvd. should provide adequate widths for right turns and left turns. Extend left turn lanes on S-29 closer to intersection.	
18	The offset for Mallard Drive and Willow Trace appear to be a concern. Refer to SCDOT HDM Figure 15.2E.	
19	Label Tapers for Tie-Ins to Side Roads. Recommend changing some of the corner radii to provide more throat widths and assist with turning movements due to angled side roads.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 51	**Rd./Rte. Name:**	Pamplico Highway	**File No.:**	21.038191D
County:	Florence	**Project Description:**	Widening from S-1204A to US 378		
Type of Submittal:	R/W	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8/2/12	**Reviewed By:**	KS, BN		

Comment No.	Comment	Response
1	Missing Location Map Label on Title Sheet (ex. Florence County)	
2	Missing NPDES Data on Title Sheet	
3	Missing Note on Title Sheet for placement of bridge with size and stations.	
4	Missing Note on Title Sheet for Bridge Plans to be Bound Under Separate Cover.	
5	Beginning and Ending Station for SC 51 does not match between Title Sheet, Typical Section, Plan Sheets, and Cross Sections.	
6	Ending Station for S-86 East does not match between Typical Section, Plan & Profile Sheets, and Cross Sections.	
7	Ending Station for S-86 West does not match between Typical Section, Plan & Profile Sheets, and Cross Sections.	
8	Missing Beginning and Ending Station notes on Cross Sections for S-731 East	
9	Missing Beginning and Ending Stations of Bridge on Cross Sections for SC 51	
10	Based on Typical Sections, mileage for Side Roads shown on Title Sheet is incorrect.	
12	Missing appropriate AASHTO and Hydraulic Reference Labels on Title Sheet.	
13	Correct Typical Section for SC 51 to exclude stationing of Bridge.	
14	Missing Benchmarks on Reference Data Sheet.	
15	Property numbers inconsistent between Strip Map and Plan Sheets. Sheet No. 4F labels three separate properties as 898, but Plan Sheets label them as 902, 903, and 933. Also Sheet No. 4F labels property as 946 but Plan Sheets show it as a second 945 property.	
16	Right of Way needs to be shown for both sides of S-86.	
17	Missing Property Lines on Sheet 11.	
18	Show Tracts No. 992, 993, and 994 on Plan Sheets.	
19	Label bridge toe of fills on profile sheets and cross sections.	
20	Show BCA lines on Plan Sheets if applicable.	
21	Missing PC and PT stations on Plan Sheet for S-86 West Bass Road.	

Comment No.	Comment	Response
23	Show earthwork and balance points on Profile Sheets.	
25	Curve data for S-731 East Relocation should show Design Speed as N/A. Refer to Instructional Bulletin 1999-1 for guidance.	
26	Cross sections say to end superelevation at STA 1113+71.88 for Curve SC51R-24, however slope is still transitioning here and does not reach normal crown until 1115+00.00	
27	There appears to be a typo on the Superlevation notes for curve SC51R-28. Cross Sections say to Begin SE at STA 1255+54.76, however slope begins transitioning before 1255+00.00. The Begin SE station should be 1254+54.76.	
28	Show guardrail on Cross Sections.	
29	The superelevation rate (e) for Curve S-86 East Reloc. does not meet the specified 30 mph design speed. See SCDOT Highway Design Manual Figure 11.3D.	
30	Label reverse radii, storage lengths, throat widths, tapers and left turn radii where omitted on plans for main and side roads.	
31	The taper used to tie-in the S-731 Relocation (sheet 30) to the existing does not meet the minimum distance based on design speed and transitional widths of the travel lanes.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 302	**Rd./Rte. Name:**	Silver Bluff Rd.	**File No.:**	2.175B
County:	Aiken	**Project Description:**	SC 302 Widening		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	9/10/12	**Reviewed By:**	RLK, BN		

Comment No.	Comment	Response
1	Verify mileage for sideroads shown on title sheet based on typical sections.	
2	The design speed shown on typical sections for Indian Creek Trail (sheet 3G) does not match the design speed given on sheet 5C.	
3	HDM Figure 22.3C recommends a superelevation rate of 4% for urban local roads and streets (45 mph and below). Sheet 5C shows a rate of 6 % being used for S-1606 and S-1849.	
4	HDM Section 11.2.4 recommends implementing a horizontal curve when deflection angles exceed 1 degree in urban areas. Sheets 12/13 and 17/19 detail deflection angles greater than 1 degree through the signalized intersection with SC 302. Ensure these locations are designed as practical as possible.	
5	Refer to HDM Figure 11.2E regarding minimum length of curves. SC 302 (curve with P.I. station 103+81.45) does not meet the recommended length.	
6	HDM Figure 21.3B and 21.3D require a desirable minimum grade of 0.5 % (0.3% for curb and gutter) for urban arterial and collectors. Profile sheets 10 and 12 show short segments or roadway that fall below these grades. Ensure drainage is properly accommodated in these areas.	
7	Typically, the width of any turn lanes at an intersection (excluding 11' TWLTL) should match the adjacent through lane (HDM Section 15.5.2.1). Sheet 7 and 13 detail 11' right turn lanes on SC 302 and Chain A, respectively.	
8	Typical sections should match the roadway footprint as detailed in plans. See Chain A (sheets 3D/13).	
9	Verify pavement depth shown in cross sections for sideroads based on typical sections. Typical sections indicate a pavement depth of approximately 0.8' while many of the cross sections appear to indicate a pavement depth of approximately 1.0'. For example see Richardson's Lake Rd. (sheet X41). Verify cross sections and revise depths where needed.	
10	Indicate finished grade on typical section sheet 3G.	

Comment No.	Comment	Response
11	Regarding typical section sheets, unsure of the need to reference standard drawings that include sidewalk. There is no sidewalk being installed.	
12	Typical section legends should detail all materials indicated in drawings. See sheets 3A and 3E.	
13	Plans sheet 9 indicates tract 100 may need slope permission. Verify and revise Right of Way Data Sheet if needed.	
14	Determine if entrance construction permission is needed for tract 30 and 32 (sheet 10). Verify and revise Right of Way Data Sheet if needed.	
15	Tract 35 is mislabeled as tract 34 on plan sheet 20. See Property Strip Map. Also relocate label for tract 35 on Property Strip Map.	
16	Label tracts and include a north arrow on sheet 14.	
17	A label for new 40' R/W is shown on plan sheet 8 at approximately station 115+75 RT. This is not shown on the Property Strip Map (sheet 4F). The same label appears on plan sheet 9 at approximately station 130+50 RT.	
18	The triangle area at approximately station 152+27.57 RT. is labeled as "25' X 10'" on plan sheet 10. On Property Strip Map sheet 4G, it is labeled as "25' X 5'." Revise accordingly.	
19	Present right-of-way lines are not plotted in a few locations on plan sheet 11. See present right-of-way between stations 166+35.89 to 169+50.00 LT. and at the west corner of the SC 302/S-968 intersection. Verifying permissions is not an accurate process without right-of-way shown. Refer to the Property Strip Map and revise accordingly.	
20	Include datum along with benchmark information on Reference Data Sheet 5C. Also include curb grade profile data on Reference Data Sheet (HDM Section 34.2.6.3).	
21	Provide existing travelway widths at tie-ins for SC 302 and sideroads where omitted.	
22	Label wheelpath radii on plan sheets for left turning vehicles.	
23	Design sideroads with 10'vertical tangent before introducing a vertical curve where possible (HDM Figure 15.2F). See S-1840 (sheet 15) and S-968 (sheet 21).	
24	HDM Figure 15.2G recommends a 5% maximum grade for landing areas where possible. Sheet 17 shows a maximum grade of 6.08% that falls within the left turn storage area on S-1606.	

Comment No.	Comment	Response
25	HDM Figure 15.2G recommends a maximum total sag break of 3% for sideroads when intersecting a superelevated mainline. Profile sheet 18 along with cross section sheets indicate a sag break of approximately 3.3%. The same is true for Hidden Haven Drive (sheet 20), Seven Oaks Drive (sheet 22), and S-1849 (sheet 23).	
26	Include alignment control note on plan sheets (IB 1997-11).	
27	Ensure centerline elevations given on profile sheets match those shown in cross sections. See Woodside Executive Court, sheets 19 and X53.	
28	Include Curb grade profiles in plans.	
29	Show superelevation notes for S-1606 (Hartwell Drive) in cross sections (sheets X51-X52) corresponding to curve data given on sheet 5C.	
30	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
31	Label tapers, reverse radius, and storage lengths in plan sheets where omitted.	
32	Recommend providing appropriate taper length for right-turn lanes along US 302. Refer to SCDOT Highway Design Manual Figure 15.5H.	
33	Utilize offset left-turn lane at the intersection of SC 302/S-81 (sheet 7) where median width exceeds 17 feet. This will improve visibility to the opposing through traffic. Reference SCDOT Highway Design Manual Section 15.5.3 for guidance.	
34	The geometric design of the intersection at SC 302 and Chain A (sheet 7) specifies double left turn lanes. Verify that the turning radii and width of the receiving lanes will accommodate a WB-62 and SU design vehicle turning simultaneously without encroachment into the adjacent travel lane. See SCDOT Highway Design Manual section 15.5.4 for guidance.	
35	Provide proper acceleration lane lengths for passenger car traffic merging onto SC 302 around sta. 144+00. Figure 16.4I in the SCDOT Highway Design Manual represents minimum acceleration lane lengths.	
36	Verify that adequate intersection sight distances have been provided at the intersection of SC 302 and S-81/Chain A (sheet 7) due to the vertical geometry.	

Preconstruction Support – Roadway Design

Quality Assurance Review Comments

Rd./Rte. No.:	SC 51	**Rd./Rte. Name:**	Pamplico Highway	**File No.:**	21.038191C
County:	Florence	**Project Description:**	Widening Phase 3C		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	8-3-12	**Reviewed By:**	VHM		

Comment No.	Comment	Response
1	Recheck mileage on title sheet.	
2	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
3	Show sidewalk on typical for clarity.	
4	Show note for variable milling on typicals for side roads.	
5	Ensure that slope permissions for all tracts affected be added to Right-of-Way Data sheet (Example: See tract 647).	
6	Show the relocated control points for SC Route 51 and Road S-897 on reference data sheet (See Highway Design Manual 34.2.7.4.2).	
7	Show bench marks on reference data sheet (See Highway Design Manual 34.2.7.4.2).	
8	Show relocated curve data and superelevation curve data for Road S-897 on reference data sheet (See Highway Design Manual 34.2.7.4.2).	
9	Show relocation the note on the plan sheets (See Highway Design Manual 34.2.7.4.2).	
10	Show pluses for the beginning and ending of tapers.	
11	Show alignment control note on plan sheets (See Instructional Bulletin 1997-11).	
13	Show the beginning and ending notes for SC Route 51 sidewalk on plan sheets and cross sections for clarity.	
14	Correct the beginning and ending directional arrows for the right location on Road S-1114 - sheet 45.	
15	Show station numbers on profile – sheet 12.	
16	Remove numbers off of profile sheet (See sheet 67).	
17	Add Erosion Control Data sheet to plans.	
18	The cross sections from Sta. 958+00.00 to Sta. 994+50.00 do not match typical.	
19	Show the superelevation beginning and ending notes on the cross sections for curves at relocated P.I. Sta. 1012+68.57 and P.I. Sta. 1077+09.75 on SC Route 51.	

Comment No.	Comment	Response
20	Lines missing on cross section at SC Route 51 Sta. 963+00.00 right of centerline – sheet X30.	
21	Lines missing on cross section at Road S-1114 Sta. 11+00.00 right of centerline – sheet X30.	
22	Remove extra lines on Road S-1064 cross sections on sheet X132 – X133.	
23	Show the words "Fill Height" at Sta. 13+50.00 on Road S-1114 for clarity – sheet X135.	

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 68	**Rd./Rte. Name:**	Yemassee Highway	**File No.:**	25.041402
County:	Hampton	**Project Description:**	Widening		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	11/5/12	**Reviewed By:**	VHM, BN, JL		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	VHM	1	Show "Plan and Profile" on title sheet instead of "Plan Profile" - sheet 1		
2	VHM	1 & 4B-4H	Show on Title Sheet "Property Strip Maps" or "Property Closure Sheet". Compare the Title Sheet to the Property Closure Sheet – sheet 1 and sheet 4B-4H.		
3	VHM	3-3B	Recheck Surface Course Type B on typical section sheets (See 2009 Guidelines for Hot Mix Asphalt Selection chart) – sheet 3-3B.		
4	VHM	5A-6	Show information for relocated centerline on reference sheet and plan sheets in accordance with Instructional Bulletin 1997-10.		
5	VHM	6 & 16	Show the correct file number on begin and end notes on plan sheets.		
6	VHM	13	Show the correct less borrow amount for earthwork near Sta. 1233+00.00 on profile - sheet 13		
7	VHM	9 & 18	Show correct sheet number for tie equality on right of centerline for Road S-471R (it is shown "SEE SHEET # 29 FOR TOPO") – sheet 9. Show corresponding tie equality on sheet 18 for Road S-471R.		
8	BN & JL	19	It is unsure of the alignment on Sheet 19 where only centerline is shown. Revise accordingly.		
9	BN & JL	16	The travel lane arrow near Station 1270 appears to be shown in the wrong direction.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US 52/401	**Rd./Rte. Name:**	North Governor Williams Hwy	**File No.:**	16.133B
County:	Darlington	**Project Description:**	Widening		
Type of Submittal:	Construction	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	1-17-13	**Reviewed By:**	VHM, JL		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	VHM	1	Title sheet need to be initialed and dated by Road Group – sheet 1.		
2	JL	1	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.		
3	VHM	1	Ensure Removal and Disposal Item sheet is in the plans (See Index of Sheet on the title sheet) – sheet 1.		
4	VHM	2	Mobilization should not be shown on Summary of Estimated Quantity sheet (See Instructional Bulletin 2005-1) - sheet 2.		
5	VHM	2 EC1-EC8	Recheck quantity for pay items: 8151101, 8151110 and 8152007 compare to Erosion Control Data sheets – sheet 2 & EC1-EC8.		
6	VHM	2	Add Stabilized Construction Entrance to the Summary of Estimated Quantity sheet – sheet 2.		
7	VHM	2 & 5	Add Catch Basin – Type 12 to the Summary of Estimated Quantity sheet (See General Construction Note) – sheet 2 & 5.		
8	VHM	2	Add Rumble Strips to the Summary of Estimated Quantity sheet – sheet 2.		
9	VHM	3E	Show the correct ending station for Road S-177 in the Design Speed information block on the typical section sheet – 3E.		
10	VHM	3-3A.1	Ensure the typical show "Point of Grade or Finished Grade" instead of "Office Survey" – sheet 3-3A.1		
11	JL	3B	For paved shoulders wider than 2 feet, the shoulder cross slope should be 24:1. This applies for Typical Section Station 377+37.48 to Station 403+34.19.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
12	VHM	5F	Remove "R = 5729.58" which is near U.S. Rte. 52/401 Northbound Lane Curve Data – sheet 5F.		
13	JL	Plan Sheets	The existing driveways along the east side of US 52/401 where widening occurs are not shown being replaced.		
14	JL	12B	It is a SCDOT practice as included in HDM section 12.3.2 that a minimum grade of 0.5% grade is provided for vertical alignment. A 0.01% grade is shown from approximately Station 223+00 to 230+00. Ensure adequate drainage is provided for this section along US 52/401.		
15	JL	17	Label left turn taper and storage lengths for turn lanes onto Steel Mill Entrance and S-724.		
16	VHM	19B	Show toe of fill note on profile sheet – sheet 19B.		
17	JL	Plan	Label any corner radii and throat widths omitted for side roads.		
18	VHM	22B	The Finished Grade Shift note says "See Sheet No. 22B". Show the correct referencing sheet - sheet 22B.		
19	JL	23,24	The 500 feet taper does not meet the minimum length based on the design speed of 45mph and the transition width.		
20	JL	25	Label Taper lengths for US 52 Business Relocation and make sure that 45 mph design speed is used when calculating lengths.		
21	JL	29	The vertical curve with VPI Station 10+30 does not meet the minimum length base on a 20mph design speed for stop-controlled conditions. Refer SCDOT HDM Section 15.2.7.3		
22	JL	31	The vertical curve with VPI Station 10+50 does not meet the minimum length base on a 20mph design speed for stop-controlled conditions. Refer SCDOT HDM Section 15.2.7.3		
23	JL	33	The 50 feet vertical curves do not meet the minimum length base on a 35mph design speed for free-flowing conditions. Refer SCDOT HDM Section 15.2.7.3		
24	JL	19-19B X101-X102	Recheck the begin and end station note for the bridge on the plan sheets and cross sections compared to the title sheet – sheet 19-19B & X101-X102.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
25	VHM	Cross Section	Show labels for present and new right-of-way on cross sections (See Instructional Bulletin 2012-1).		
26	VHM	1 & TS1-TS2	Traffic Signal Plan sheets (TS1-TS2) are out of numerical order in the plans (See Index of Sheet on the title sheet) – sheet 1 & TS1-TS2.		
27	VHM	1 & EC1-EC8	Erosion Control Plan sheet 9 is missing out of the plans (See Index of Sheet on the title sheet) – sheet 1 & EC1-EC8.		

Consultant
Roadway Widening

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	US 21 Business	**Rd./Rte. Name:**	Boundary Street	**File No.:**	07.036939A
County:	Beaufort	**Project Description:**	US 21 Business Improvements		
Type of Submittal:	RW	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	11/30/12	**Reviewed By:**	RK, BN, JL, TD, TE, DS		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
1	RK	IL1	Refer to HDM Figure 34.1B regarding sheet order. Place roadway structure sheets prior to the erosion control plans.		
2	RK	1	(In response to previous comment #19). Recommend updating traffic data past 2012/2032. The data currently shown will be considered obsolete after the first of the year.		
3	RK	5A	To be consistent, recommend showing superelevation on Reference Data Sheet as a percentage or either having units of ft./ft., not both. Curves 15 and SC 170 Curve 1 are shown with units of ft./ft. while Curve 17 is shown as a percentage.		
4	RK	Multiple	Provide design speeds for all side roads on typical section sheets. Design criteria (vertical curves, grades, etc.) cannot be verified without design speeds.		
5	RK	35	(In response to previous comment #26). Minimum grade for urban arterials utilizing curb and gutter is 0.3% (HDM Figure 21.3B). See profile for SC 170.		
6	RK	17, X61	Designers should ensure a proper tie in at the end of the project on US 21. The superelevation for Curve 17 (US 21) should have extended into the project but cross sections show normal crown through station 272+00. Unsure of the transitions after the project ends.		
7	RK	3-3F	(In response to previous comment #30). Ensure pavement design is reviewed and approved the SCDOT State Pavement Design Engineer.		
8	RK	Multiple	Provide typical sections and cross sections for all sideroads detailed on plan/profile sheets. Ensure all side road mileage is accounted for in the mileage summary table (title sheet).		
9	RK	3C	Specify point of grade on sheet 3C.		

Comment Status: **1** = Comment Submitted; **2** = Unresolved; **3** = Resolved, Not Yet Implemented; **3.5** = Resolved as Noted; **4** = Closed

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
10	RK	3F	Provide graded aggregate base note on sheet 3F.		
11	RK	4-4B	Several tracts shown on plan sheets are labeled as "VOID" on Right-of-Way Data Sheet. Provide all property information relevant to the project on the Right-of-Way Data Sheet.		
12	RK	Multiple	There are several tracts in which the Right-of-Way Data Sheet does not agree with the permissions shown on the plan sheets or they are not shown on the Right-of-Way Data Sheet at all. Revise Right-of-Way Data Sheet and ensure all tracts match permissions labeled on plan sheets.		
13	RK	4C-4D	Clearly note all present and new right-of-way on property strip map.		
14	RK	5A-5C	(In response to previous comment #37). Include all applicable information on Reference Data Sheet (HDM Section 34.2.6.3 and IB 1997-11).		
15	RK	11	Provide labels and stationing for all shifts and/or tapers for new right-of-way (sheet 11).		
16	RK	16,17	Provide corner radii for right-turning vehicles on sheets 16 and 17.		
17	RK	7, 19	Provide centerline relocation note on applicable plan sheets for SC 170 (IB 1997-10).		
18	RK	Multiple	In response to previous comment #47). Place alternate pipe information on plan sheets (IB 2009-4).		
19	RK	10, 11, 17	Label left turn lane widths on sheets 10/11 and 17.		
20	RK	11, 17	Label taper on sheet 11 and 17.		
21	RK	16	Ensure proper intersection sight distance at Marsh Road and Ribaut Road.		
22	RK	Multiple	Remove portions of profiles not included in this project. Designers should elect not to begin/end project in the middle of vertical curves.		
23	RK	39	Provide VPC/VPT stations and elevations for Greenlawn Drive.		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
24	RK	35	The End Construction note on profile sheet 35 is chopped off. Clearly show End Construction note.		
25	BN, JL	7,8	The west bound lanes along US 21 appear to shift near Station 314+00 and carry thru the US 21 and Polk Street Intersection. It is unsure the purpose of this shift with a 5 feet median shown for the dual left turn lanes.		
26	BN, JL	Typical	In reference to the typical sections, SCDOT Road Data Services recognizes the functional classification of US 21 (Boundary Street) and SC 170 (Robert Smalls Parkway) as Urban Arterials. In accordance with current SCDOT design guidelines, urban arterials should be designed with a lane width of 12'. Refer to SCDOT Highway Design Manual Figure 21.3A for guidance. No design exceptions were submitted for this controlling factor.		
27	BN, JL	7	The geometric design of the intersection at US 21 and SC 170 specifies double left and right turn lanes. Verify that the turning radii and width of the receiving lanes will accommodate a WB-62 and SU design vehicle turning simultaneously without encroachment into the adjacent travel lane. Also, 12 feet lane widths are the minimum desired for dual left and right turn lanes. See SCDOT Highway Design Manual section 15.5.4 for guidance.		
28	TD	Multiple	(In response to previous comment #59). Distances on the order of 2400 feet between the farthest spaced signalized intersections facilitate opportunities to provide for strategically placed non-intersection crossings. Coordinate with the District Traffic Engineer to determine if other crossings are appropriate.		
29	TD	Multiple	(In response to previous comment # 61). 100' is minimum radius based AASHTO Bike Guide's recommended 20mph design speed.		
30	TE	Multiple	(In response to previous comment # 67). No consensus was evident in the meeting minutes for June 11, 2012. Highrise Live Oaks should be considered in the narrow medians. Cathedral Oaks should be considered for roadside only. All plantings shall conform to the SCDOT ARMS.		

No.	Reviewer	Section / Dwg. No.	COMMENT	RESPONSE	STATUS
31	DS	N/A	(In response to previous comment #67). Submit a landscape plan to verify the compliance of all tree placement.		

SCDOT **Preconstruction Support – Roadway Design**

Quality Assurance Review Comments

Rd./Rte. No.:	SC 101/SC 290	**Rd./Rte. Name:**	Various	**File No.:**	23.037685A
County:	Greenville	**Project Description:**	SC 101/SC 290 Widening		
Type of Submittal:	Right-of-Way	**Submitted By:**	[redacted]	**RPG:** [redacted]	**Consultant:** [redacted]
Review Completion Date:	3/26/2012	**Reviewed By:**	RLK, BTN, TD, JPT		

Comment No.	Comment	Response
1	Recommend revising beginning latitude coordinate shown on title sheet to 34°57'04". Only 60 seconds exist in a minute.	
2	Title sheet should indicate there are no equalities in stationing below the project mileage summary table (see IB 2011-5).	
3	Include Design Reference Label and Hydraulic Design Reference Label on title sheet (IB 2003-8 and IB 2009-3, respectively).	
4	The Environmental Permit box should be completed with an "X" in the appropriate locations (IB 2011-5).	
5	Horizontal curves should meet minimum radii values given in HDM Figures 11.2C and Figure 11.2D. Currently, Curves L101-1, Taylor_1, Taylor_2, and Oneal_1 fall below minimum values.	
6	Superelevation for the project will need to be verified during a future review based on plans as provided. Radii will need to be adjusted and longitudinal grades and design speeds need to be included in curve data. Based on cross sections, superelevation development as currently designed does not meet SCDOT standards in some locations (see HDM Chapter 11).	
7	Design speeds and longitudinal gradients (see IB 2003-11 and HDM Figure 11.3A for LG %) should be given within the curve data on Reference Data Sheets. Design speeds given in curve data should match those found on typical sections. For horizontal curves at T-intersections where superelevation cannot be developed properly, design speeds in the curve data should be marked "NA" (IB 1999-1).	
8	Design vertical curves on Taylor Rd (sheet 16, having VPI's of 22+25 and 24+20) with a design speed of 35 mph given on typical section. Although the end of Taylor Rd. is considered a stopping condition, the current design may violate the needed stopping sight distance, which is in excess of 250' due to the grade adjustment. The stopping condition does not apply to curves away from the intersection.	

Comment No.	Comment	Response
9	Show pavement markings on plan sheets (lane markings, medians, etc.) in addition to the pavement marking sheets that will be included in final plans. Plans as submitted are difficult to determine the roadway footprint in certain locations, especially transitional areas.	
10	All thru-lane widths are generally designed to be identical. Plans show an 11' outside lane on SC 101/290 from approximately station 20+21.6 to station 35+45.2 (sheets 6/7). Other thru-lane widths on that section of roadway are 12'. This section is classified as an urban arterial requiring all travel lanes to be 12'. Verify classification and revise plans where needed.	
11	As SC 101/290 is classified as an urban arterial, 10' shoulders (or curb and gutter) are required (HDM Figure 21.3A). Typical sections 1 and 2 indicate a 6' valley gutter section. Valley Gutter is generally reserved for local routes. Verify classification and revise plans where needed.	
12	Urban collectors require an 8' shoulder (2' paved) or curb and gutter (HDM Figure 21.3C). Typical section 5 shows portions of SC 101 and Taylor Rd. to have 6' shoulders. Verify classification and revise plans where needed.	
13	Verify horizontal stopping sight distance around curve 101ML_2 (sheet 6). The stopping sight distance required at 40 mph is 305' (HDM Figure 10.1A). Vehicles traveling around the inside of the curve (outermost lane) will have a line of sight that may become obstructed by objects near the right-of-way at this location.	
14	Ensure pavement design depth detailed in typical sections 2, 3 and 4 match cross sections. Pavement design for these typical sections would indicate a depth of approximately 1.429'. Cross sections within this range of typical sections appear to be closer to 1'. Verify and revise if necessary.	
15	Typical section should indicate sidewalk cross slopes to be "50:1 MAX."	
16	Typical sections indicate guardrail being utilized on the project. New guardrail should be plotted in plans based on the symbology given in Standard Drawing 100-105-00. Guardrail should also be shown in cross sections.	
17	Typical section 6 includes dimensions labeling the travel way width as both "35.5" and "Varies 11-18". Revise dimensions to be accurate. The same is true for typical section 7.	

Comment No.	Comment	Response
18	The graphics shown in typical sections indicating removal of existing valley gutter is not a technique used by SCDOT. Unsure of the width of valley gutter to be removed at each location (i.e. back slope only?). Add dimensions to all "Remove Existing Valley Gutter" widths shown in typical sections to aid in the calculation of quantities.	
19	Inserts A and B on sheet 3A do not show the same area to be removed as the full drawing. For example, insert A appears to remove the valley gutter from a location inside the edge of pavement while the full typical shows it to be removed from outside the edge of pavement.	
20	Add dimensions to partial drawings of the sidewalk adjacent to the retaining wall on sheets 3A and 3B. Refer to HDM Figure 14.6K regarding the placement of barrier relative to curbs. Also, see comment #51 regarding pedestrian shy distance due to the sidewalk being adjacent to the retaining wall. Ensure retaining wall has proper end treatments as to not become a hazard themselves.	
21	According to plan sheet 7, it appears tract 23 may need slope permission. Verify and revise Right-of-Way Data Sheet if needed.	
22	According to plan sheet 7, it appears tract 39 may need slope permission. Verify and revise Right-of-Way Data Sheet if needed.	
23	According to erosion control sheets, several tracts requiring erosion control permission are not noted on Right-of-Way Data Sheet. Verify all erosion control permissions are noted on Right-of-Way Data Sheet. Also, silt fence is generally only placed in fill sections. Erosion control sheets detail silt fence being placed in cut sections.	
24	A portion of Oneal Road appears to be constructed inside tract 39 near the tie in with SC 101/290 (sheet 7). Determine if new right-of-way is needed at this location to avoid constructing Oneal Rd. outside right-of-way.	
25	For clarity purposes, recommend labeling all new right-of-way on property strip map individually, including around drainage features.	
26	Clarify if new right-of-way will be needed adjacent to SC 101/290 at approximately station 24+50 LT. The sidewalk in this area exceeds the 40' existing right-of-way (sheet 6).	
27	Unclear as to why property lines continue once inside right of way. Property lines are generally not shown inside of right-of-way. One example would be the property line for tract 8 appearing to continue down the centerline of SC 101 (sheet6).	

Comment No.	Comment	Response
42	Label grades on profiles for Taylor Rd. (end of construction) and Oneal Rd. (beginning of construction) on sheet 17. The vertical curves at these locations could not be verified.	
43	The elevation values shown for Oneal Rd. (sheet 17) need to be switched to match the profile given. The key indicates proposed elevations on the left as should be. However, the proposed elevations are shown on the right under the profile.	
44	Proposed and existing elevations shown in profiles should match those given in cross sections. Revise proposed elevation at station 30+50 on Oneal Rd. (sheets 17 and X 36) to match.	
45	Revise the traffic data shown on sheet 1. The design year should measure from the expected construction completion date. Refer to SCDOT Highway Design Manual Chapter 9 Section 9.6.2.	
46	In reference to the typical section no. 7, use 30:1 for shoulder cross slopes if sidewalks are not present or anticipated. See SCDOT Highway Design Manual Section 13.2.6.3.	
47	Pavement beyond the second lane from the crown should have a cross slope of 36:1 (2.78%) and should be shown in the cross sections. See SCDOT Highway Design Manual section 13.2.3.3 for guidance.	
48	There is no superelevation (e) shows for Curve L101_1. Also, label for Curve 101ML_1 shown at the wrong location on sheet 5A. Verify and revise accordingly.	
49	Plans sheets should show full development of left-turn and right-turn lanes design (reverse radius, storage length, lane width, etc.) at the intersections.	
50	Plans sheets should show all the transition taper lengths. Reference SCDOT Highway Design Manual Figure 15.5K for guidance.	
51	Sheet 3A—Provide 6-foot sidewalk where walkway is immediately adjacent to a retaining wall to take into account the pedestrian shy distance cited in the AASHTO Pedestrian Guide.	
52	Sheets 4B, 5B—Mountain View Road is S-23-109.	
53	Sheets 4B, 5C, 5E, 6—Roadway between Property (3) and Property (17), the location of "Curve 101ML_4," is SC-290, not SC-101/290.	
54	Sheets 4C, 5C—O'Neal Road is S-23-298.	

Comment No.	Comment	Response
55	Sheet 6—Recommend carrying sidewalk around the radii of SC-101 to the end of construction. Sidewalk curb ramps will be required on the corner radii of both SC-101 and Taylor Road. Since Taylor Road is signalized, recommend placement of sidewalk curb ramp opposite the approach of Taylor Road consistent with present/future signalization (pedestrian) needs. Indicate the locations of curb ramps in plans.	
56	Sheet 7—lane widths shown near STA 31+50 are 11-12-12-12-11. Greater compliance with EDM-22 and AASHTO Bicycle Guide would be achieved with 12-11-12-11-12. According to the LRTP and the TIP this project was to have had bicycle lanes as part of the project. See attached email from Keith Brockington of GPATS as reference. Provide curb ramps at the offset side road intersections (North Buncombe Road, O'Neal Road). It is unclear if (or how) Blue Ridge Drive is still intersecting with O'Neal Road.	
57	Sheet 8—provide two curb ramps at each corner of the SC-101/290 and US-29 within project limits. Coordinate with location of pedestrian push buttons for signal. Indicate the locations of curb ramps in plans.	
58	This project will increase driveway grades between stations 18+40 through 37+00; ensure that sight lines are good.	
59	The sidewalk hatch pattern impairs overall readability.	
60	Standard Drawings depict a typical 3' pedestrian minimum clear width at driveway aprons. We are in the process of updating our standards to reflect the 2005 PROWAG requirements which specify 4' as the minimum clear width. If it is reasonable to achieve a 4' clear width within the constraints of the project, please do so.	
61	Where retaining walls create vertical drops greater than 30," please consider providing a fence for fall protection; i.e., station 26+35. Refer to Standard Drawing 806-505-00 for guidance.	